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Basic production principles and their didactic relationships with the educational process are discussed. Presented are the general questions and answers which originally occurred within the committee group. Production personnel within the society of televised instructors have particular roles and responsibilities which they should uphold as intermediaries between the director and instructor. The development of presentational resources in course planning is presented as a collection of materials, the selection and contact of quest speakers, and the planning of special sessions. Again, questions and answers are given which occurred in the meeting. Production techniques and presentation techniques applicable to different areas such as short films, maps, and graphs are discussed. An original case study is presented using all the materials thus far collected within the volume, together with Harry J. Skornia's banquet speech.

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the role of production in televised instruction

REPORT OF A SEMINAR
FOR PRODUCTION PERSONNEL
SPONSORED BY
THE NATIONAL ASSOCIATION OF
EDUCATIONAL BROADCASTERS

at

Pennsylvania State University
University Park, Pennsylvania
August 26—28, 1959

edited by

L. P. Greenhill
H. D. Sherk
Betty McKenzie

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PREFACE

During the spring of 1959 the Closed-Circuit Television Committee of National Association of Educational Broadcasters conducted a survey of member institutions that are engaged in the televising of classroom instruction. The purpose of the survey was to determine in what ways NAEB could be of most service to people engaged in instructional television.

Among other questions, members were asked for their reactions to the suggestion that a seminar be conducted for production personnel who work closely with teachers in the televising of classroom instruction. A number of topics were proposed for inclusion in the seminar.

The response was overwhelmingly in favor of such a seminar, and plans were made for it to be at the Pennsylvania State University under the sponsorship of NAEB. The seminar was titled "The Role of Production in Televised Instruction," and was limited to fifty production people to be nominated by member institutions.

Each nominee was asked to prepare a short paper on a topic related to the theme of the seminar to be submitted along with the application. A selection was made from these papers for actual presentation at the seminar. Papers were selected on the basis of relevance to the various topics proposed for the program.

Mr. Rudy Bretz, of the University of California at Los Angeles; Miss Rhea Sikes, of WQED Pittsburgh; and Mr. Robert Rippen, of NBC and "Continental Classroom," accepted invitations to serve as consultants to the seminar.

As a footnote, it may be of interest to add that the Closed-Circuit Television Committee of NAEB has a new designation which more accurately reflects the interests of its members and constituents - namely, the Instructional Television Committee of NAEB.

L. P. Greenhill
Chairman
Instructional Television
Committee

ACKNOWLEDGMENTS

The National Association of Educational Broadcasters wishes to acknowledge the many contributions of time and energy which made this conference possible. The NAEB CCTV Committee (now the Instructional Television Committee) made the initial plans for the seminar, helped outline the program and selected participants, but primary responsibility for the success of the conference rests with the committee chairman, Leslie Greenhill, and his staff at Pennsylvania State University.

In addition to the untiring efforts of Mr. Greenhill, we want to acknowledge the wonderful cooperation and assistance of several members of his staff, notably Messrs. Luther F. Kepler, Jr., William F. Pohts, and H. Dennis Sherk. These gentlemen were invaluable in both the organization and the execution of the conference.

Adding greatly to the stature and worth of the conference were the three consultants who gave generously of their time to share their knowledge and experience with the seminar participants. These were Miss Rhea Sikes, Station WQED; Mr. Rudy Bretz, UCLA; and Mr. Robert Rippen, NBC.

The NAEB also wishes to acknowledge, with gratitude, the continued interest and support of the W. K. Kellogg Foundation. Since 1951, grants from the foundation for the operation of NAEB Headquarters have included sums specifically designated for professional development activities, making such seminars as this possible. Over the past several years, some twenty seminars and workshops have been supported, in part or in whole, by W. K. Kellogg Foundation funds, resulting in in-service training and professional development for educational broadcasters without which it would have been impossible for the movement to have reached its present degree of importance and respect.

It should be pointed out that this conference was conducted largely as an informal seminar. Consultants often spoke only from notes, followed by lengthy discussion. Therefore, in most instances, only a summary of the most pertinent points brought out in these informal talks and discussions has been prepared for this report. In addition, each participant was asked to prepare a paper on some particular aspect of the problems to be considered by the seminar. Several of these papers were presented at the conference, as time allowed, and this report includes as many of these as limitations of space and relevance to the theme of the seminar would permit.

Harold E. Hill
Administrative Vice President
NAEB

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I. Opening Remarks

WELCOME ON BEHALF OF NAEB

by William Harley
President, National Association of Educational Broadcasters

It is my pleasure on behalf of NAEB to welcome you and thus officially open this seminar. Although NAEB has conducted some thirty-five seminars, conferences, and workshops during the past ten years, this is the first seminar for people working in closed-circuit television. As such it is the second major earnest of NAEB's interest in and support of closed-circuit uses of TV in education.

The first, of course, was the amending of our constitution last year to provide opportunity for membership of those institutions engaged in the operation of closed-circuit TV facilities. This was in recognition of the fact that, though NAEB was originally composed of broadcasters only, it was too narrow a concept if it failed to recognize the activities of those people and institutions who were doing important and significant work in research and utilization of TV in point-to-point transmission. Accordingly, the constitution was amended so that NAEB could provide closed-circuit people with a service organization and professional home. The next step was to appoint the closed-circuit committee of NAEB--and its major work during the first year was the organization and planning of this seminar.

It's called a "Seminar on the Role of Production in Televised Instruction," and you will note that no mention is made in the title of closed circuit. I think this is well advised. We do not wish to foster segmenting of the educational television field nor to promote the development of specialists with narrow concerns and concepts. Obviously, effective production techniques for televised instruction are similar no matter what the method of transmission. Many institutions operate both open-circuit and closed-circuit facilities, and institutions which are operating only on a closed-circuit basis now may ultimately acquire broadcasting stations. Each approach is important in doing different jobs and meeting varying requirements. NAEB is dedicated to promoting the effective and appropriate use of all of the new media--separately, in combination, and in integrated ways--in the service of education.

This topic is an important and challenging one and has a focus that has long been needed in discussions of educational television. I trust the discussion will be productive and that the publication of these deliberations will constitute an important addition to the literature of the field.

WELCOME ON BEHALF OF PENN STATE

by C. R. Carpenter
The Pennsylvania State University

It is my pleasure to welcome you to the Penn State campus. Mr. Dennis, our vice president of academic affairs, has specifically requested that I give you his cordial greetings. Mr. Dennis follows closely the National Association of Educational Broadcasters' activities and developments and he has encouraged active cooperation between Penn State and the NAEB.

With your permission, and with due apologies for representing our own achievements at Penn State which relate to your interests, I shall summarize peak activities which have had and are having some effects on educational broadcasting.

First, in 1948 Penn State became one of three agencies which contracted with the Navy's Special Devices Center to conduct research in depth and breadth to determine the potentials of radio, motion pictures, and television when applied to the training of large numbers of people. The general requirement was to conduct research to discover means for the high speed training of large, dispersed populations to high levels of performance. The Instructional Film Research Program was active for eight years and yielded sixty-six Navy reports and many published articles. The results have close pertinence to many problems, questions, and processes of educational television programing. Results of film research transfer neatly to television and deserve careful study.

Second, in 1952 the American Council on Education and Penn State sponsored a national conference which resulted in a book entitled A Television Policy for Education. This high-level policy conference has had considerable impact on and usefulness for the nation's development of educational television.

Third, Penn State provided in 1952 the initiative, leadership, and resources for the planning of a complete ETV system for the Commonwealth of Pennsylvania.

Fourth, in 1954 we reoriented our efforts from film research to experiments with closed-circuit television and to the introduction of television into the university as one means of accomplishing the large job of teaching more and more students and teaching them well. In general this research, which has been mainly operational in character, has validated many of the hopes and hypotheses of the proponents of ETV. The models which we have constructed and tested have at least contributed some of the necessary confidence for many "experiments" throughout the country--including those at Hagerstown, Miami University, Chicago, San Francisco, and major national programs of the Fund for the Advancement of Education.

Fifth, in 1957 the American Council on Education and Penn State staged a conference which focused attention and thought on teaching by television. The resulting publication was College Teaching by Television. This book reflects the spirit and substance of a group of people struggling intellectually and sincerely with the major issues and full range of challenges which arise when the technologies of television are introduced into the sanctum of teaching and learning.

These activities have occurred at Penn State even though we do not have an independent broadcasting station. You may be interested to know that at this late hour, we are asking the FCC for a rule change and are applying for Channel 3 to be assigned to the university. In addition, we have always worked without having what any realistic and conservative professional broadcaster would estimate to be adequate funds, staff, buildings, and facilities. Since Penn State is not unique in its "have not" status, models and results developed under austere conditions are insured of wide applicability at other educational institutions.

SOME MAJOR CONCERNS

Mr. Greenhill has asked me to put in words some of my major concerns about the immediate future of instructional television operations and developments. I shall state them succinctly and frankly.

1. I am concerned about increasing complexities of equipment and operations and the related spiraling costs. To regulate these, we need defined standards and well-planned models of operations which can serve as a basis for making many judgments and decisions. Another set of regulators could be continuous operations analyses and cost accounting. Furthermore, I suggest that we resist the temptation to copy and imitate all the well-established professional-commercial operations. Rather, we should develop, create, and invent new, distinctive, and appropriate models for serving educational functions and cultural objectives. This leads into my second main concern.

2. Assuming that an educational TV operation, whether closed circuit or broadcast, is a coordinated educational enterprise and not a schizoid complex, what is its correct role within the context of its existence? How can an ETV activity be operated efficiently and at the same time make a maximum contribution to the achievement of deserving educational objectives? What postures do we assume relative to the people we serve--the instructors on the one hand and classes or audiences on the other hand? What is the optimum between the extremes of passivity and aggressiveness in the work of improving educative programs? How do we as operating people prepare ourselves sufficiently well and to such high standards of excellence that we come to be recognized meritoriously as professional educators--not merely as technicians? I believe this last question states for me the heart and theme of this workshop.

3. A third related concern is the professional and public "image" which is being formed of educational film, radio, and television people and their activities. This image, whatever its character, relates directly to our acceptance by other professional educators and thus affects the amount and kinds of opportunities for achievement open to us. In spite of all the good promotional activities of NAEB, JCET, NEA, ACE, NETRC, and the two FAE's of the Ford Foundation, the new media are only peripherally perceived by those educators who are responsible for the main forms and functions of American education. Maybe this is as it should be, but nevertheless, we need to make accurate objective assessments of the relevant images and their consequences, and then take appropriate actions. We can have confidence, I believe, that in the long run visible merit and valuable contributions will be recognized and rewarded.

In conclusion, it is most commendable that the National Association of Educational Broadcasters has recognized and is meeting the need for training and exchange of information and skills of those people who must interact most closely and directly with the people who contribute the substance for instructional television. In these interactions and in those of students and audiences of the screen presentations lie some critical determinants of what ETV is and will become.

II. Principles of TV Production and Their Relation To Learning

SOME BASIC PRODUCTION PRINCIPLES AND THEIR RELATION TO LEARNING

A report on a presentation by Rudy Bretz
University of California at Los Angeles

Mr. Bretz introduced some observations and theories on production as a starting point from which to build a discussion. He defined "production" as being that which interacts between form (technique) and content (subject). There are, he added, certain standards of production that must be met if a TV presentation is to result in effective communication. These production standards should include visibility of subject, audibility of subject, an aesthetically pleasing presentation, an enhanced emotional effect as it relates to content. Production should never distract. If this occurs, the line of effective communication from content to consumer is interrupted. Mr. Bretz pointed out that the inability of some production people to see past technique poses one of the more serious problems in instructional television. TV should not be looked upon as an end in itself. It is a substitute for face-to-distant-face groups, but not a substitute for face-to-face situations. That is, TV can effectively communicate with large numbers of people; it does not necessarily replace the small, seminar-type class.

Mr. Bretz stated that the essence of TV communication centered around two fundamental points--emphasis of subject and control of subject. Since the TV monitor technically represents the main line of communication between the teacher and pupil, all production efforts should be aimed towards a presentation which not only emphasizes critical subject matter but one in which distracting elements have been carefully and skillfully eliminated. This is achieved, in the final analysis, by one man--the director. His role is the most important part of production, whether for broadcast TV or closed-circuit TV.

To strengthen his point of view, Mr. Bretz gave several illustrations:

1. At one institution the TV director audited the history course which was eventually to be offered by means of television. As a result, he was able to make certain qualified judgments with regard to the production elements that were ultimately reflected in a more effective presentation.

2. One of Hollywood's outstanding directors, George Stevens, builds a scene in relation to other actors. He employs a four-walled set and in this environment, lets the actors develop their roles. Stevens feels that since the director's main responsibility is to the film's intended audience he should, in effect, "represent" them and manipulate the production accordingly.

3. Prof. Huston Smith of St. Louis has stated that his director, acting as a sounding board, actually helped him to clarify his thoughts.

It is not always necessary or even possible, in some cases, for the director to go far back into course content. Mr. Bretz maintains that the director should not be expected to become an authority on the subject to be televised. However, it is necessary for him to become familiar with the course material, the instructor's classroom technique, and any unique characteristics that might determine the manner in which the subject is to be presented.

To further define the responsibilities of the director, Mr. Bretz recalled his definition of TV production, i.e., the interaction between content and technique. "Content" must filter through "technique" to the audience. Therefore, the director's primary responsibility is to convey effectively the instructor's intended message (content) to the target audience. If he (the director) concerns himself only with technique, then he becomes merely a technical director.

Mr. Bretz made this comparison: Fancy and elaborate production techniques, like sugar coating on a pill, are all right as long as the coating doesn't alter the effectiveness of the medicine.

* * *

SUMMARY OF DISCUSSION

Questions from the floor were addressed to Mr. Bretz.

Q. Is it possible to accurately perceive when students are learning? Is there a danger that the director, who is so much involved with the production, can be too sophisticated to really ascertain the effectiveness of the presentation?

A. In this area, much of the responsibility rests with the instructor. Since he is a specialist in teaching he should always have in mind the utilization of the medium (and all of its special capabilities) which must carry the instructor's message to the student.

To have students present in the studio with the instructor is not the complete solution to perception of learning, since reactions would not be from the point of view of the TV student. Sometimes other instructors or advanced students can serve as technical advisers to the director and, as spotters at a football game, can assist in determining what areas need to be emphasized and which are most likely to be difficult for the viewing student.

The instructor should have a monitor in the studio. It is important that the instructor know what the student is seeing at all times. The only problem is to prevent the instructor from becoming a "monitor watcher." In one situation a monitor was mounted directly on the camera. The instructor could then conveniently check the "line" picture without interrupting his eye contact with the televiewing students.

Q. Is it necessary for the instructor to rehearse his programs?

A. No. In general, if the instructor has been properly TV oriented and trained, rehearsals are not necessary. Of course the occasion might arise when a rehearsal would be warranted, although this would not be a fully timed program so much as a check-out or a "camera run-through."

Q. Has it been determined that the instructor must look at the camera?

A. It seems obvious that the instructor who teaches his students by means of television needs to give all of his attention to the camera. If his attention is divided between a face-to-face group and a televiewing group, it is most likely that the TV viewing group will suffer. Eye contact is really more significant than simply looking at the camera. It would be included in the entire concept of maintaining an uninterrupted line of communication from the teacher to his student. Therefore, eye contact should be looked upon as including two kinds of contact--physical and mental.

III. Roles and Responsibilities of Production Personnel in Televised Instruction

ROLES AND RESPONSIBILITIES
OF PRODUCTION PERSONNEL IN TELEVISED INSTRUCTION

by Boyer Jarvis
University of Utah

The task of the teacher is a challenging opportunity, whether the teaching situation involves Mark Hopkins, a log, and one student, or some gifted professor of the present day, a closed-circuit television system, and one thousand students. In any teaching situation, the essential and challenging opportunity of the teacher is to encourage in his students a lively interest in learning, and to bring them into contact with facts, opinions, judgments, interpretations, experiments, and any other appropriate stimuli from which they might gain knowledge, insight, and/or wisdom. And a necessary talent for teaching, whether on the end of a log or in front of a television camera, is an ability to dramatize the subject being taught. Such dramatization may be as overt and easy as falling off a log to demonstrate the pull of the earth's gravitation, or it may be as subtle and elusive as the pacing with which an intricate argument is developed to prove the existence of free will.

An ability to dramatize appropriately, and hence to communicate effectively, is second only to mastery of subject matter in the determination of an individual's capacity as a teacher. The dramatization of teaching is a highly personal matter, and methods which work "like a charm" for Professor Y may be entirely unsatisfactory for his colleague in the same department, Professor Z. Some teachers seem to have an instinctive sense for the dramatic, while others, often after years of trial and error, have learned how to make their teaching "come alive." When the teaching is "alive," the students, if they are awake, respond with interest, and usually accept the teacher's challenge to learn. The existence of an accepted challenge to wrestle with unfamiliar ideas and to seek for further information leading to understanding, is the mark of a successful teaching situation.

It is the task of production personnel engaged in the televising of instruction to help teachers to present their subject matter in interesting and challenging ways to students whose contact with the teacher is made through the instrument of television rather than face-to-face. The roles of production personnel might be characterized by such terms as "friendly critic" and "interested assistant."

As critic, production personnel need to observe closely the television teacher's characteristic style of presentation in a so-called "normal" classroom setting, as well as before the camera. Without presuming to have competence in the teacher's subject matter, production personnel should be competent to suggest appropriate means and methods by which the instruction might be dramatized most effectively. It hardly seems necessary to add that production personnel should be able to recognize, and to leave unmolested, really good teaching when they see it. Production personnel should be well acquainted with the special capacities and with the limitations of television as a medium for relaying instruction, and they should be able to explain these capacities and limitations clearly to the television teacher. The constant objective of production personnel should be to help the teacher do an effective job of teaching. This objective, stated negatively, is to avoid the implication that the teacher's task is in any way changed by the use of television.

In the role of assistant to the television teacher, production personnel need to do everything possible to keep the fixtures of television from interfering with the processes of teaching. If the teaching process as it exists is essentially sound, the televising arrangements should be adapted to the teaching. If the teaching process proves to be in some ways ineffective, production personnel should propose changes, but in the interest of improved teaching rather than for better television per se. For example, when contemplating televised instruction in a particular course, the production personnel may observe that the teacher concerned is accustomed to using very few, if any, visual aids. If they believe that visual materials could make a valuable, useful contribution to the teaching process, production personnel should discuss with the teacher the possible use of visual aids as an element of good teaching--not as a device for achieving an effect in television.

In all of their work in televised instruction, production personnel should remember that television is an instrument, not a goal. They should constantly put good teaching ahead of good lighting, but they must not overlook the fact that poor lighting may weaken the dramatic effectiveness of the teaching process. Production personnel should regard themselves not as stagehands for a performer, but as collaborators with a teacher using the instrument of television to communicate to his students a lively interest in learning.

* * *

SUMMARY OF DISCUSSION

In the discussion, a number of statements and comments were made by the participants about the teacher's role in the production picture.

1. Some concern about the director and his relationship to the teacher was expressed. How can a director of lesser stature than a dean, for example, be expected to work on the same level as the academician?

2. To overcome the fears and concern that might be present with the teacher, it was generally agreed that competent production people must thoroughly acquaint and familiarize him with the medium. This could include any or all of the following suggestions: pre-production conferences, practice sessions in and out of the studio, kinescope recordings of lectures or rehearsals for teacher self-evaluation, administrative and departmental sanction for TV program, veteran TV teachers working with neophyte TV instructors, formal TV training courses for instructors.

NURTURING CAMPUS-WIDE EXPLORATION OF CLOSED-CIRCUIT TELEVISION TEACHING

by Richard B. Lewis
San Jose State College

Did you ever tame a bird? To catch and nurture the interest of a college faculty and staff in using television is a similar experience. Patience, humility, competence, and sensitive response to feelings, moods, and attitudes, all play parts in the activities of those who would give leadership to campus television projects. If conviction is based upon sound scholarship, if enthusiasm is sufficiently strong yet carefully controlled, if devotion to the basic purposes of others motivates action, and if necessary basic competence is demonstrated--then, with a little bit of luck, slow progress can be made toward winning faculty understanding and acceptance of television as an ally and promising tool for education.

Since faculties, like birds, tend to be wisely and/or instinctively skittish in the presence of unknowns, the following points are offered as suggestions for consideration by all television operating personnel.

Don't snow them! When teaching personnel show curiosity about television, move in slowly. Sudden bursts of conviction and enthusiasm cause protective defenses. Never burst forth with technical information, terminology of the trade, or blasts of implications that you are the key to a great, complex, mysterious technology; remember, they don't need television, they can walk away. In fact, if they don't walk away, they still don't need to know a fader from a cable.

Get them involved! Ten successful minutes before the camera, with a monitor handy to let them see themselves, may do more to eliminate fear than one month of your pursuasive selling. Or--with diplomacy--you may discourage poor teachers from appearing on TV, and at the same time create an enthusiastic and even an effective user of television. What you do and say will make the difference. The last hold-outs against television are those who persist in saying, "I have never used TV; I'm against it."

Promote experimentalism! Beware of flat and firm statements of finality about how, when, and why to use television. In the first place, you will be wrong--no final answers are in. Then, second, you must nurture an experimental viewpoint toward every aspect of television teaching. There are infinite possibilities in every situation; many of them will work, some better than others. Suggest that everyone should have the opportunity to try different approaches, methods, materials. Defer as long as possible the day when anyone can say, "This is the way to teach with television." The natural tendency to freeze methods is a threat to ultimate optimum utilization of television. Therefore, create a spirit of "We are all in the same stage of development--try, experiment, try some more." Don't let a failure stop the trying; don't throw out the baby with the bath water.

Avoid closed corporations! Devise methods of keeping groups with common interests within departments working together. This probably leads to good television utilization; it certainly leads to better human relations. Avoid setting up a martyr or a star performer. Develop teams. If one is on camera, others work with observing students; then have them change places. There is less risk in a mediocre TV teaching lesson than in an embittered target for colleague barbs. TV advances when several teachers help each other, and when TV personnel help them all.

Involve the administration! What are the problems that beset administrators today that TV may help solve? Are the same problems facing teaching personnel? Think this one through on your campus, and bring administrators and teachers together. Then, too, develop procedures for the use of TV for direct administrative purposes, such as testing programs, registration, faculty orientation, and institutional interpretation and promotion. Workshops and programs for visiting groups permit involving administrative personnel directly; put them "on the air."

Beware the Status Seekers! "BTO's" (Big Time Operators) can destroy the future of television in colleges, whether they are ambitious faculty members or TV production personnel. The production director who insists on being the master teacher, who "controls" the professor, who gets the credits will be rewarded by rear views of departing potential television enthusiasts. Yet, sure skill on the part of every technical staff member must be evident in teaching programs; the "invisible waiter" in a fine restaurant has skills to be emulated: unnoticed, he applies his talent to the comfort and pleasure and success of his guest. "Tips" for producers will be support of television in the institution by proud and satisfied professors. Status-seeking professors require special, individual attention; fortunately they are few in number.

Focus on teaching and learning! Television is not destined to replace the teacher. Television will not, of itself, insure learning. Respect the great insecurity felt by teachers when challenged by a new tool; recognize the fact that, badly used, television could do a disservice to education. The sole purpose of using television is to make teaching and learning better than they are without television, to extend the scope and depth of education in the face of a growing population and increasing necessity for disseminating and assimilating knowledge.

The role of the teacher will be affected by television, and--used wisely--television can make possible more effective person-to-person teaching in small groups; this idea suggests the many things to be learned about television teaching and viewing, about scheduling and deploying teaching talent, about making learning an active experience both in the presence and out of the presence of the television screen. Thus, TV personnel must be concerned about education and every aspect of the educational process; thus, too, almost every aspect of television production is subject to analysis in terms of teaching and learning procedures, content, and personnel.

As we initiate, nurture, and promote exploration of television teaching in colleges, we must take great care not to be like children, delighted with the new toy, unable to contain our enthusiasm. The faculty member--and there are many--who tentatively pokes his head into the studio and says, "Thought I'd look in and see what you're doing. I have an idea that . . ." If you figuratively jump out from behind a tripod and shout, "Whoops!"--too bad, not only is he gone, but you may have lost him for good.

* * *

SUMMARY OF DISCUSSION

Some comments dealt primarily with the producer:

1. The producer is the real intermediary between the director and the instructor.
2. He may be the main person responsible for closed-circuit TV operations.
3. A producer cannot talk in terms of teaching, but only in terms of communicating.

These comments pertained to the teacher and his expected role:

1. Upon conclusion of the TV series, the instructor could be allowed to take the visuals with him. This might create some additional incentive and acceptance of TV.
2. In some institutions there is the feeling the very best instructors are not given the opportunity to use TV. Production people have very little say in choosing the instructors for television.
3. It is a problem, and an unfortunate one, that many of the top instructors are too involved with professional chores to be released for TV teaching.
4. How do you turn aside those instructors who are interested in TV teaching primarily for the resulting increased status it may bring them?
5. The concept of increased status as a result of TV teaching is a good incentive for younger instructors.
6. Generally, those instructors who are willing to "take the chance" with TV and volunteer to pioneer in this area of communication are effective TV teachers.

IV. Planning and Resources for Televised Courses

PREPARATION AND PLANNINC OF THE TELEVISED COURSE

a report on a presentation by Miss Rhea Sikes
WQED Pittsburgh

Miss Sikes expressed a genuine awareness and frank recognition of the diversity of production problems in such a group as was represented in this TV seminar. By reviewing the background of the WQED program, by presenting the problems faced by their group, as well as the manner of meeting their problems, it was hoped some answers or suggestions might develop for treating situations common to other production groups.

Miss Sikes felt that her problems in some respects were different from those of most seminar members, for the following reasons:

1. **At the time WQED began operations it met with considerable skepticism on the part of the public.**
2. **There were no existing formulas; producers started with a statement of lesson purpose, not a given format.**
3. **The age of the WQED target audience and the broadcast factor made teaching by straight lecture impossible.**
4. **Teachers in her program were full-time teachers.**

Miss Sikes next turned to a discussion of what, in her mind, were important considerations for laying the groundwork for educational TV broadcasts.

Considerations of a general nature:

1. **Remind teachers to keep the purpose of the lesson in mind.**
2. **See that the instructor spends his or her time not on how, but what will be taught. (The teacher must decide what to put in and what to leave out.)**

Of a more specific nature:

1. **Work directly with the teacher to try to sell the teacher on the use of certain presentational techniques.**
2. **Acquaint the teacher with the discipline of the medium.**
3. **Help the teacher to develop a sense of timing.**

In the actual preparation of a series some suggestions which have grown out of Miss Sikes's own experiences might be of assistance to the neophyte producer:

In long-range planning--

1. **Collect materials well in advance of the time they are actually to be used.**
2. **Select and contact guests well in advance of preliminary planning sessions.**

Actual preparation--

1. **Meet with the guests.**
2. **Plan special settings.**
3. **Guard against the "overly pat" presentation.**

* * *

SUMMARY OF DISCUSSION

Participants addressed numerous questions to Miss Sikes.

Q. Don't you rehearse the guests? Not to do so is a pretty big gamble isn't it?

A. We have no actual rehearsal other than possibly setting up some anticipated shots.

Q. How long are your programs?

A. Programs for elementary grades are twenty-five minutes; for high school, thirty minutes.

Q. Don't you think those segments are too long? We found that the span of attention in the elementary grades is appreciably shorter, which led us to tailor down our programs for these groups to ten minutes, returning with additional segments after the hour.

A. We have cut our foreign language programs down to thirteen minutes.

Q. Do you have anything to say about the selection of teachers?

A. Teacher selection is dependent upon the subject to be taught. In the case of Russian language, for example, we have nothing to say about selection. In the selection of English teachers we do. Applicants all give a ten-minute lesson on the same subject. After the presentation, suggestions for improvement are made by a committee after which the applicant repeats the lesson. Selection then is made by the committee monitoring the presentation.

A producer soon finds out who doesn't want to participate, and which of the teachers appear to be most flexible.

Looking for movie stars is a bear trap. Don't fall in it. Don't be trapped by good looks alone.

Q. Does this method of selection always hold up?

A. It is not infallible. Some teachers can't carry through.

Q. How do you get original applicants?

A. They are selected by school administrators.

Q. Does the school also select the curriculum?

A. Yes, and we're happy about this. We are saved from fighting textbook salesmen.

Q. What happens in the case of the unsuccessful teacher? Isn't there any bitterness on the part of this individual?

A. Not generally. Most teachers are too mature to have such a reaction to their not having been selected.

Q. I'm impressed by the remarkable growth of the WQED program. How did you interest the participating schools?

A. There was not a concerted effort for expansion. Growth came about through general interest or elimination of subjects where there was a lack of interest. From the basic subjects, interest turned to languages (French, Russian) and to the sciences, with Harvey White's physics series and so on.

Q. What do the schools do for you?

A. At the moment we ask them to provide thirty cents for each participating student. We need the money to take care of such things as preparation of study guides. Such services are expensive.

Q. What sells your program?

A. It sells itself.

Q. How large is your production staff?

A. Eleven full-time and twenty-five part-time people.

Q. How many of your programs are repeats?

A. We never repeat anything the same way unless it's a film.

Q. Don't visual materials carry over from one presentation to the following series?

A. Teachers attack things differently. Content may be similar but the next teacher may not be able to handle the same visuals.

Q. Why not keep the same teacher?

A. It depends on the teacher. He may go on to something else, or the course may not be offered the next year.

The discussion shifted to the nature of a TV instructor's teaching load and the type and amount of compensation. The chairman asked questions of the participants to get a sampling on these issues--four institutions had full-time TV instructors; two institutions said their instructors were paid an extra stipend on an overtime basis; approximately half of the delegates said their instructors were teaching on television as part of their regular teaching load; and the remainder of the participants seemed to split between weighting a TV course as 6 hours rather than the standard 3 hours, and teaching one TV course and one course in addition to the televised course.

Q. Do you prefer to have the same teachers return for a subsequent series?

A. Yes, all things being equal.

Q. What about the use of substitutes? How are they paid?

A. Substitutes are given an honorarium. There is a good possibility they may be used next year.

Q. How have lessons improved from year to year using the same instructor? In our case a course is completely re-evaluated each year.

A. Our only experience along this line specifically has been with reading. We did re-evaluate and rework this course. The second time it was even better than the first. The only other similar experience was with a science. The first time the course was given the instructor had to be convinced. The second year he did a tremendous job.

Q. What about the possibility of taping and re-using the lessons?

Comment from floor: Our setup demands that everything be taped. The same program can be re-used or redone, depending on circumstances. Material in some instances doesn't get old.

A. Our supplementary program is done the same way. We'll tape our live program and repeat it on the same day at another hour.

Q. When a series is kinescoped or taped, do you run into any contract problems?

Comment from floor: The question is raising its ugly head in our program. The lessons are being repeated throughout the state, and the professors are asking residual rights.

Q. In this connection, what about sale of recordings?

A. We have rented series. However, we only have one print, and can't afford to ship it out. If it comes back damaged, that's it.

Q. How much demand has there been for guests on your programs? How much success have you had with this type of program?

A. Success depends on whether or not the host teacher is awed by the guest. The host teacher often refuses to use guests. We don't prevail upon him.

Q. What does it cost generally to secure guest lecturers?

A. Some receive $100. Others, like Robert Frost, do it out of the goodness of their hearts. We have gone to publishers of texts, authors, and artists.

Comment: We have a successful program built around the use of guests. The program "Guests of Honor" has a skillful interviewer meeting with campus guests.

Q. What is the optimum number of people to bring into a course without interrupting the continuity of a course? This guest business can be overdone. What is the optimum?

A. Use a guest only if he can do something for you. In one series of 150 programs, we used a guest only 7 times. The teacher should be constantly in control.

Q. **I'm disappointed that you are talking only about teachers and not about students. How do you utilize actual students in your programs?**

A. **We don't bring students into the studio unless they can make some contribution. To bring students into the studio makes spectators of the viewing students.**

DEVELOPMENT OF PRESENTATIONAL RESOURCES

by Paul Blanshard
University of Pennsylvania

I dare say many of you have had the kind of experience I had last year in pursuit of visuals. We were doing several shows on Russia. I wanted a few pictures of Russian cities, and particularly educational institutions. My own university library had nothing to help me. The Free Library of Philadelphia--which was proud of several hundred thousand photos on file--had no Russian pictures dated later than about 1924. Calling Washington, I learned from the information officer in the Soviet Embassy that they stocked no pix; only by going to Sovfoto in New York could I obtain what I wanted. Sovfoto was delighted to see me, at $12 per print, so I still didn't have my photos upon arrival at the Manhattan bookstore to which they had grudgingly directed me. Two hours there with a surly clerk netted me one small book of travel photos like the kind you and I see in every drugstore of a city we are visiting. A reasonable facsimile of what was needed was now in hand. Time spent pursuing the visuals: twelve hours.

I would not want to wish that kind of time-consuming search on anyone in our business. Nor would I want to deprive anyone of the pleasure of reading Police Gazette on institutional time in search of legitimate visuals. My concern is to simplify the acquiring of visuals. And I do not feel that centralizing a source of graphics for all ITV producers and directors would produce any kind of conformity which would deaden our imaginations.

The question I want to raise with you is simply this: Isn't it time to consider anew the establishment of a National Instructional Television Library?

Instead of searching our minds and resources endlessly for run-of-the-mine graphics, we could get in touch with the library.

Instead of wondering where to find a musical bridge for a dramatic bit in a Shakespeare presentation, we could ask the library.

When we intuitively remembered a film strip or film clip or still photo which ought to do the visual job of the moment--if we had it--we could call the library.

Before having our own art staff prepare chart, graph, or special drawing, we would ask the library what they had.

Before scanning twenty back issues of Life or National Geographic for a certain picture story, we could check the library.

Now I want to repeat that my concept for a library does not envision stripping us of our individuality or mechanizing TV production. I have the feeling that a considerable fraction of our graphics could be standardized to the extent that I would be able to use a Minneapolis traffic scene to illustrate well the metropolitan traffic problems of Philadelphia--and furthermore that a visual I had borrowed from the library after its use at Minnesota would give my viewers at the University of Pennsylvania an added dimension, a national scope. Left for me to wrestle with, and probably never share with strugglers elsewhere, would be those highly personal graphics good for just one use in just one situation.

A library of this kind will not spring full-blown from the loins of some foundation, I am afraid. But I do see, as potential contributors to a library, the industrial manufacturers of the equipment we use to project graphics. I can imagine other industrialists--and maybe even educational associations in time--contributing funds and films and artwork, once the idea got going.

The NAEB would appear to me to be a logical administrator of such a library, at one of our large institutions now devoting some thought to instructional TV. You would need a highly competent librarian to head the staff, a man with a large memory, a sense of humor, and a strong imagination. Under him could be a group of graduate assistants competent at filing and locating materials.

The function of this library would be to accept--from us--second-hand graphics, and to beg from all available sources new graphics. This growing collection of materials would be filed by subject matter. Since there are only so many courses taught in the United States, I would say that a building the size of the Pentagon could house the full-grown collection. I believe each accredited producer or director of ITV in the country should turn in a 5,000-word paper each year as part payment on his membership--a paper dealing with techniques of using graphics--and the staff might abstract and file these materials. Logically, a quarterly or monthly bulletin of production ideas and outstanding visual materials available might grow out of the work of this library.

To this Mecca we might well go once a year ourselves, to see and to read and to study on projection equipment housed there. The library might well become the meeting ground for such conferences as this one. Certainly the institutionalizing of ITV to this extent would not be harmful to our producer-director role in the eyes of TV teachers who might well want to journey to Mecca themselves.

I am not certain how many of us would benefit today from such a library. But if instructional TV goes where I think it should go in improving the quality of American education, I dare say that millions would benefit by 1970.

My plea is therefore to dust off this fine idea out of the past and give it substance for the future. The one thing which distinguishes the educational producer-director from his commercial colleague is the noncompetitive situation. So I am happily presenting this idea for a library while remembering that the motto on my one coin today says E PLURIBUS UNUM.

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SUMMARY OF DISCUSSION

Mr. Harold Hill said that NAEB would, of course, like to help in implementing such a program. Unfortunately when similar undertakings were considered in the past they didn't bear fruit because the people in the field didn't supply the materials. Mr. William Harley concurred that too often projects of this nature fall flat due to lack of general interest and initiative.

Q. Mr. Blanshard, you want a place to serve as a repository for charts, grey scales, etc. These presumably would be catalogued. How would we write and get them?

A. I haven't thought out the plan actually. Writing to the library for information would be the first step, it seems.

Comment: I personally would be delighted to get rid of materials rather than destroy them outright, which is often the case.

Miss Sikes remarked about having just destroyed three years of artwork--a waste of time and talent.

Dr. Carpenter suggested that there might conceivably be an agreement with the Library of Congress to discover, find, and collect and make these materials available for distribution. This operation is an enormous task. These materials should be available in the same way a book is available.

Mr. Hill: The point is to start and help your people. If, for example, only photographs were distributed the first year, this would be a beginning.

It was suggested from the floor that it would be useful to have a repository of reports discussing courses that have been taught on TV.

It was thought that the NAEB Newsletter might contain information on these matters.

V. Helping the TV Instructor

THE PRODUCER AS A PSYCHOLOGIST

Edith M. McNabb
Millikin University

A producer is not a producer unless he can produce, and production must be predicated upon the producer's knowledge of the technical requirements of production and upon his awareness of the strengths and weaknesses of the medium. He must, moreover, be creatively alert and sensitive, and, in addition, must be something of a teacher. At this point perhaps we should pause for a moment.

What are the requisites of a teacher? Overly simplified, the answer might be: a comprehensive knowledge of and respect for his field, a strong desire to communicate, and a mastery of the appropriate communication skills.

Like the teacher, the producer must have unqualified respect for the content. Even though he cannot reasonably be expected to equal the mastery enjoyed by the teacher, he should try to understand as much as possible, even study the subject, if necessary, because his creativeness will almost certainly be in direct proportion to his degree of understanding. The producer's passion for effective communication should supplement that of the teacher, and the communication skills of the teacher should supplement the specific skills of the producer.

But beyond these basic qualifications, the producer--in educational television, at least--must be something of a psychologist. He must understand the instructors with whom he works. He must concern himself, therefore, with their temperaments, their backgrounds, and their relationships with their colleagues, in order that he may be more aware of their possible motives, their emotional reactions, their satisfactions, their weaknesses, and their strengths.

The producer must decide early in the preparation period what tack he intends to take. For instance, if the instructor is lacking in confidence and projection, almost certainly the producer will need to accept the fact that more rehearsal and/or conference time will be required and that the first telecasts in the series will probably lack some desirable finesse. This is true because the instructor must be convinced, through experience, that he can get the plane off the ground, even though fancy maneuvers (of which he is aware) are out of the question for him at the moment. To observe a shy, competent instructor develop into an effective, even dynamic, communicator is one of the many rewards enjoyed by the producer. Equally exciting is the moment when the carefree extrovert, after having romped through a series of telecasts, looks the producer straight in the eye and earnestly asks, "Did I give the roll cue right this time?" Day of days!!

Teaching in a fish bowl makes unusual demands upon the instructor, demands to which he may be unaccustomed. As a result, his emotional reactions usually are heightened. For instance, if he is of the sensitive, retiring type, his fright may make him extremely uncomfortable and critical of himself and others--or if he is gay and outgoing, he may yield to the temptation to "show off." Perhaps the minority extremes present no greater problems than do the majority average, just more interesting ones.

In addition to understanding the instructor, the producer must be able to identify himself with the instructor. Although identification should not be dependent upon compatibility, it is usually more easily achieved if the two temperaments are compatible--and becomes more difficult as incompatibility increases. In any case, achieving identification is largely the producer's responsibility.

What attitudes, on the part of the producer, are most likely to cause the instructor to feel that his responsibilities are being sensitively shared?

1. The producer's respect for the course content. From necessity, this must involve lack of bias. The producer must deal with any course assigned to him as enthusiastically as though it were his favorite subject.

2. The producer's acceptance of the sequence employed by the instructor as well as the general method of teaching. In these matters the instructor must be sovereign.

3. Dedicated attitude toward production, based on objectivity? For instance, "Nothing is too much trouble" or "Improved effectiveness in use of the medium" rather than "Overcome faults."

4. Patience with instructor's rejection of producer's ideas. Sooner, or later, usually sooner, the instructor begins to realize that the sole purpose of the suggestions has been to increase effectiveness in "putting over" the content. When that happy moment arrives, mutual respect is in the making.

What are some of the techniques which the producer might employ to further mutual respect?

1. Refrain from mentioning immediately after the telecast lapses and mistakes made by the instructor. There might be an exception with the overly confident individual who will go merrily on his way promptly forgetting that he did not utter a single accurate cue during the entire telecast.

2. Minimize rules per se. It is much better to have a few sessions in the control room and studio explaining, for instance, why certain cues are necessary, why graphics must be thus and so, why roll cues are important. After the basic matters have been dealt with realistically the instructor accepts other suggestions more readily.

3. Avoid undermining the instructor's morale by comparison with other instructors.

4. Be generous with honest praise. Take time to be specific. To damn by faint praise is easy. What may be just another telecast to the producer may be the first one, or a very important one, to the instructor.

Some stereotypes are familiar to all producers. For instance, there is the instructor who insists upon "feeling natural." The producer explains that communication by means of a camera is not a natural situation; therefore he should not expect to feel natural until he has gained more mastery. This falls on deaf ears. The instructor repeatedly refers to the fact that some time previously he had enjoyed himself immensely while participating on a television show. He had been told by the producer to "just be yourself." The instructor is totally unaware of the fact that upon the delightful occasion referred to he had talked to the wrong camera, had prevented a CU by keeping graphic material in constant motion, had caused the director to go to gray for eight seconds before film, and while on camera had acknowledged time signals with a nod. All very natural, indeed!

Then there is the "happy time" addict. Some years ago a producer was rehearsing a group of students for a complicated and important telecast. After some time had passed, the subject matter instructor remarked, "I am sorry that this is taking so long, because most of all I want my girls to have a happy time." Well, fortunately, after proper rehearsal, the telecast went as smooth as silk. The girls were happy, but more importantly, they were proud.

"Case studies" from the mental files of every producer who thinks of himself, not only as a technician and a teacher, but also as a psychologist would afford multiple examples of the challenging and exasperating but highly rewarding experiences involved in the producer-instructor relationship.

Does it ever fall to the lot of any producer to work with the "ideal" instructor? Sometimes. What is he like? (He is deserving of a peroration.) He knows his field so well that he is not appalled by one minute of fill before back-time; he plans carefully and smartly; his mind is agile; he enjoys new experiences; he is facile in ad lib communication; he is genial both on and off the air; he becomes a friend for life; he causes the producer to affirm, "I thank my lucky stars that I can forget all about psychology."

* * *

SUMMARY OF DISCUSSION

Following the above presentation, a discussion developed as to how much control over a program should be exercised by the instructor and how much by the director. There seemed to be a divergence of opinion here. A sampling of the comments from the floor follows.

1. Our programs are all open circuit. They are rehearsed with the pattern pretty much established, and then taken to a commercial station for presentation.

2. In our installation the director doesn't see the show before it goes on the air. The instructor gives cues. The director is aware of only broad cues such as roll cues.
3. We're putting the profession back two years if we allow the "talent" to cue cameras.
4. The instructor is the best authority on just how a show is to go. He is in the best position to tell. The director doesn't know.
5. The easiest way to handle a program is in a sort of ad lib situation. The instructor organizes the visuals in the way he wants to use them. The director goes into the booth with nothing but a list of visuals.
6. There is no excuse for a director's not knowing or not having enough time to find out what is going to be used and when on a given program.
7. How many of you have ever see a medical program run-down sheet? You must discuss this with the instructor and the instructor must do the cueing.
8. We aren't trying to push TV back two years. We're working with a commercial station and making as much progress as we can under such limitations.
9. Amen. We're completely at the mercy of the director. Some directors don't want a run-down sheet.
10. You can go too far on this argument. A director has a certain amount of flexibility. TV is bringing out planned organization of lectures. Most teachers don't want to direct.
11. The camera crew is important though apparently as yet this hasn't been recognized. If you have confidence in them, you can sit back and take it easy, knowing you can get the shot you want. There are certain subtle cues an instructor can use (picking up pointer, etc.) without being too obvious.

Mr. Rudy Bretz summed up the discussion in this way: Rehearsal is important for coordination. The amount of coordination necessary depends on the complexity of the program. I believe simplification means better television, though there is a limit, of course, as to how far you can take simplification. I don't think you can do away with the switcher or the cameraman. Simplification is both economical and good for teaching.

TELEVISION INVOLVEMENT FOR THE TV TEACHER

by Royal D. Colle
Ithaca College

There once was a man who wanted to build a house--a house not with the rather usual design he found in the neighborhood homes whose difference from one another lay in the position of the porch or entrance-way. He wanted something unique. He wanted to make a fresh approach to this house-building project. And so he thought he would do something different from what most people would do: He hired a retired drugstore owner to act as his contractor. This man, he thought, would have no preconceived ideas as to how the house should look, since he had not been in the business. Surely, he would have the freshness desired.

They agreed to use the trial-and-error, hit-or-miss method of operation in the designing and building of the house. As the weeks wore on, they found that with the trials there were many errors; they found that with the hits there were many misses. When the job was as near to completion as it could possibly get, the structure toppled down before their eyes. The approach was fresh and the house was very different, but it could not stand and serve as it was intended that it should.

Sound like a ridiculous way to get a new approach? A rhetorical question. Sound far removed from the consideration of the training and preparation of teachers for television teaching? Not very.

Not long ago a school system was developing plans for a closed-circuit television teaching installation which was to include the interconnection of several schools in the district. It was suggested to the teachers who were to be doing the television teaching during the coming year that it would be wise in the summer intervening not to take any television courses. This action--or lack of action--the official stressed, was desirable in order to give these instructors a "fresh" approach to the new operation. Shades of a toppling house!

Sound like a ridiculous way to get freshness? To get a new approach? The question is just as rhetorical as in the case of the man and the drugstore-owner-turned-contractor.

It is absolutely necessary to prepare television instructors--and in more ways than one.

Several years ago I investigated the reaction of college-level instructors to the use of television in education.* This was when closed-circuit television was just getting up a head of steam; the first closed-circuit investigation at Pennsylvania State University had just been released and others were coming off the presses. In my investigation in New England, I found that, generally speaking, the persons less familiar with and less informed about the uses and successes (and failures) of instructional television were the ones most likely to reject its adoption as a teaching tool. The report suggested at that time that while it would not be a panacea, more information concerning television's use and capabilities would be helpful in an administrator's efforts to put teachers in a more receptive frame of mind for the acceptance of television.

While at that time the main concern was with information about television and the achievements gained through its use, I have been struck since then by the desirability of getting future or potential television teachers involved with television. Even in the circumstances where teachers accept the use of television in education, the acceptance is often followed by a "let George do it" kind of remark: "I'm sure it can be used in psychology, but surely not in art instruction," or, "I couldn't go on, I'd be scared to death." The interest in self-involvement is sometimes severely lacking.

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* Royal D. Colle and Robert S. Albert, "College Teachers' Attitudes Toward Closed-Circuit TV Instruction," Audio-Visual Communication Review, Volume 6, No. 2 (Spring 1958).

It seems possible then to identify two main problems in this preparation of teachers for TV instruction. First is the problem of selling them on the feasibility and soundness educationally of using television. With more and more widespread use of the medium beyond the experimental stage this phase of the preparation is becoming less and less a concern. This is not to say that all resistance has been overcome. It has not. But even some of the resistance is based on things other than whether television is an effective tool. For example, technological unemployment is one spectre which has been raised by opposition to instructional television. This, incidentally, casts no derogatory shadow over television; on the contrary, it constitutes a rather positive appraisal.

The second problem is to prepare the teachers to use the medium properly. Incentives such as reduced academic load and increased salary certainly may encourage teachers to go into television teaching--but more is needed than these rather earthly incentives to get the job done right once the medium is accepted.

Frequently teachers go to summer workshops in preparation for television teaching. Certainly encouragement by administrators and supervisors of this type of groundwork for closed-circuit teaching is going to produce more masterful teachers than encouraging an on-the-job trial-and-error approach. Here the teacher can get the basic information and practice which will later free him or her to develop new and fresh techniques. It cannot be done effectively when the fundamentals have to be digested simultaneously.

And what of the character of the workshop? Great consideration should be given to going beyond the introductory type of television workshop--the type which includes fundamentals of lighting, camera composition, graphics and presentation techniques--the accelerated or capsulized television-fundamentals or studio-techniques course that almost every television-radio department offers. We have seen success beyond our hopes bloom from requiring teachers and administrators in one course to operate in all the studio crew positions, including producer and director. How many times I have heard a budding teacher--as a television director--dress down another budding television teacher for moving too rapidly, for jiggling objects in close-up or for wandering about a set without proper motivation! Of course, these things are detectable and demonstrable to the on-camera teacher in reviewing his kinescopes and video tapes, but the person who learns most in "live" situations is the teacher-turned-director. This person can go through the agony which someone directing him or her might go through when things don't go correctly. And these mistakes will make an impression and will be remembered when this director becomes the on-camera teacher.

Having a future television teacher operate in many crew positions and do as much grass-roots production work as possible, rather than listen to someone lecture about it, has some other rather obvious advantages in addition to making him a better "performer." The industrial relations and personnel management people have the age-old bromide about a person doing a better job in his own little niche if he is able to see it in relation to the whole operation. This holds true in the TV situation. A television teacher is far better able to understand the problems of directors, audio men and cameramen once they have been involved in the behind-the-scenes activity. Again, this must be involvement, not a cursory lecture on the problems of cameramen and directors. The teachers will also find it a lot of fun--and this helps.

Not long ago I talked with a former summer TV workshop student who is an art teacher in the public schools in my college community. We were speaking particularly of an art program she had staged on our station as part of a community affairs type of program. She mentioned two things that were especially significant. One was that she was far less frightened by the prospect of going on television because she had been through somewhat the same routine in our laboratory sessions. Secondly, when something went wrong in the production, she understood the problem involved. We needed to do no smooth-tongued glossing over. Her appreciation of the director's chores prevented a molehill from becoming a mountain and a possible feeling of frustration with the medium of television. She has already expressed an interest in appearing again, and we will be interested in having her. It could have been different.

A year ago I had as a graduate student in a summer TV workshop a man who teaches music on Long Island. He came into the workshop because he was already taking one course at the college and needed another three credits. He made no bones about his pessimism concerning the possibility of using television to teach anything--especially music. He was at the college again this year for a course, and as we chatted about the new closed-circuit installation in his community's new school, he expressed some grief that the board of education had gone outside the school to get "some audio-visual aids man" to run the operation when he was available and willing. But he is all ready and eager to teach music on television.

Another student I had in a summer workshop was a school principal. He too was vigorously exposed to every aspect of a television studio operation within the limitations of our facilities. While he himself was not expecting to teach on television, he has found his background of tremendous help in the assistance of his teachers who are teaching in an arrangement with a commercial television station. And at the time of this writing, he mentioned to me on the phone that he is very receptive to the idea of using closed-circuit television within his school system. As an administrator he knows the relationship between preparation time for classroom and television teaching and the relative wear-and-tear on the individuals involved because he himself planned, rehearsed, produced, and directed programs. He was "television involved."

Vast amounts of study in psychology, child development, and other fields have indicated the terrific deteriorating effects of the unknown and unfamiliar on the individual. Television workshops which get their students fully involved and get them seriously acquainted with the fundamental elements of the whole television operation can help diminish the type of reaction which has caused some schools to get off to poor starts, both in caliber of production and in teacher morale, and which has caused the crumbling of at least one closed-circuit system. Rather than curbing innovation, a good preparation can propel instructors more rapidly into developing freshness, into developing new approaches and more effective television teaching.

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SUMMARY OF DISCUSSION

The chairman called for comments from other participants describing their methods and techniques for training TV instructors.

The amount of time and effort devoted to training TV teachers ranged from a required 4-hour credit course to little or no actual training. For example: Hagerstown reported that their teachers in the field came in for a 6-hour credit course designed to prepare teachers for appearances on television. Mr. MacLennan said their teachers all prepared a 15-minute lesson which was presented and criticized. Mr. Hudspeth commented on their practice of bringing in instructors and showing them what the equipment does and letting them "play" with it.

Mr. Wolf minimized the importance of having the instructor get on camera and use the equipment. He felt that the most valuable practice was to get the instructor in front of the camera and have him stay there.

Miss Sikes commented on what seemed to her to be a successful technique--to bring the teachers into the control room and have a staff member serve as a demonstration teacher. Personnel on the floor and in the booth explain to the teachers why certain techniques are advisable or essential.

Several persons reported the use of kinescopes and video tape to allow potential instructors the opportunity to view sample lessons.

Mr. Bretz suggested for training purposes the use of a small monitor installed on the camera tripod allowing the instructor to see exactly what his performance looks like.

A GUIDE FOR TELEVISION INSTRUCTORS

by H. Dennis Sherk
The Pennsylvania State University

University instructors, it seems, become CCTV teachers--possibly in more instances than one might care to admit--by accident or self-selection. At Penn State this sort of recruitment has resulted, on the whole, in the selection of good instructors, and more than occasionally, a real "find." True, some instructors have lacked animation, while another may have been overly zealous and dynamic. We've had a hypochondriac, an orator or two, and have, on occasion, fallen heir to a stubborn Pennsylvania Dutchman, but by and large, they've been good instructors.

They have been, however, almost without exception, relatively untrained in the techniques of televised instruction at the time they first participated in our CCTV program. We all know that the television instructor, regardless of his ability as a teacher, must obviously become familiar with the tools with which he works; he must know what television can do and what its limitations are. The question becomes, How should the CCTV instructor be trained?

At Penn State we haven't offered formal workshops for our TV instructors. Not that we haven't seen the need for a more extensive training and preparation period. We have, in fact, hoped that an opportunity might develop whereby certain instructors could be freed from all academic obligations for a period of time so that they, along with other members of a team, including a graphic artist and a production specialist, could devote full time to preparing courses in their entirety for TV.

Such an extensive training and preparation period has not seemed possible nor practical. Our TV instructors frankly haven't had the time. When an adjustment of load is made, the adjustment is made only during the semester the instructor is teaching on TV. Ideally, a load adjustment should be made prior to the semester he appears on TV.

Then too, I'm not so sure that all of our instructors could be interested in an extended workshop period. Seven of them are heads of departments, one an associate dean. Sheer logistics make an adequate training program almost prohibitive. Since 1954, when we began our CCTV operations, over seventy instructors have been associated with the program, teaching a total of thirty-two different courses. To give all of these people adequate training presents a very real problem. In spite of this apparent problem, we think we have obtained a measure of success with our instructor training program. Very briefly the procedure for getting the instructor and his course ready for television follows this pattern:

When a department expresses an interest in having a course presented on television for the first time, notification is given the university scheduling office so that proper arrangements for scheduling can be made. At the same time our division office is contacted.

The coordinator of CCTV then either meets with the new instructor himself, or assigns one of the staff coordinators to work directly with the instructor at the outset. The coordinator and the instructor get together in several informal sessions, at which time the instructor is given a general introduction to television practices--with special emphasis on presentational techniques that would seem most applicable for his particular course.

At this time, too, the instructor is encouraged to come to the studio for "on camera" rehearsals. These "dry-runs" might entail a complete run-through of a single lesson or might be devoted to the "on camera" examination of numerous visuals of the sort the instructor intends to use during the progress of his course. The amount of time spent in the studio prior to the actual televising of a course is left pretty much up to the wishes of the individual instructors. In a course such as zoology, for example, the instructor may have numerous "on camera" rehearsals to check out demonstrational techniques such as the use of various microscopes, the quality of projected slides, visibility of tissues in dissection, etc.

We have found that the period which encompasses the first few planning sessions--up to that time when the instructors become "veterans" with three or four weeks of experience on TV--is the most valuable and fruitful period in the development of the TV instructor. At this time he is extremely appreciative of any help we might provide. This is the period when he understandably feels certain anxieties, the time when he is open to suggestion and actually eager to receive assistance.

In an effort to capitalize on this "period of greatest return" Mr. Kepler, of our staff, and I prepared a "Guide for Television Instructors" to be given to all instructors teaching on television for the first time. The booklet is an attempt to present information which should first alert the instructor to some of television's fundamental considerations of direct concern to him, and secondly, offer concrete suggestions which might be helpful in presenting his particular course on television.

The advice and suggestions contained in the guide have grown out of our experiences with CCTV. Some of what we have treated may be applicable and relate to television production generally. We hope it does. On the other hand, the contents of the manual reflect what has seemed in our minds to be particularly vital and helpful for our instructors in the Penn State program.

The "Table of Contents" shown in Figure 1 should provide some idea of the information included. Copies of the "Guide for Television Instructors" may be obtained by writing to the Division of Academic Research and Services, Pennsylvania State University, University Park, Pennsylvania.

* * *

SUMMARY OF DISCUSSION

Additional manuals and guides of a similar nature were brought to the attention of the participants:

A manual for the inexperienced TV teacher, prepared by Edith McNabb, Millikin University.

A manual for agriculture extension personnel, from the University of Wisconsin (reported by Andresen).

"ABC's of TV"--Information for preparing community TV programs (suggested by Lewis).

"TV Is For You"--Prepared by the U.S. Department of Agriculture (as suggested by Folwell).

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  Sample "Run-Down" Sheet
  Format for Typewritten Material

Figure 1

VI. Training of TV Production Staff

THE SELECTION AND TRAINING OF STUDENTS FOR CLOSED-CIRCUIT TELEVISION OPERATIONS

by E. Scott Bryce
University of North Dakota

The small educational institution often must make use of student help ir the operation of closed-circuit television facilities. The reasons for such use range from limitations of time, professional staff size, and budgetary problems to a consideration of the necessity of students majoring in this field to participate in an on-going television training situation as part of their education.

The necessity and/or advisability of using a student staff to operate the television equipment accompanies the consideration of the proper training of the students in television skills and concepts, possibly in a limited time, and to a substantial degree of proficiency. The efficient use of closed-circuit television equipment for any educational purpose depends on a ready, willing, and skilled television organization. Since one cannot begin teaching by television nor begin other closed-circuit television activity, without a reasonably well-trained staff, the problem of television skills and training must be first considered. As many student staff-members would be working on a voluntary or low-fee basis, there are considerations of attracting as well as retaining them in this activity. Perhaps the courses provided by the school in the field of television would help attain the objectives sought. However, there may be an insufficient number of students available from those electing to take these courses. Also it may be considered inadvisable to orient the television course work more strongly toward skills rather then toward an understanding of the media from a broader base. This of course is a moot question.

One possible answer I would like to discuss is the laboratory training technique in which students would take part on an extracurricular basis. This proposal suggests problems to be considered. Would one be able to interest enough students? Would the laboratory require a good deal of faculty time? How would one motivate the students to learn quickly and well? Would one be able to maintain interest of the students while they were learning skills? Would the necessary skills be mastered during a period of a few hours a week? Could the students be taught the necessary teamwork?

At the University of North Dakota we needed a proficient television staff made up of student volunteers. We wished to carry on needed television-teaching experiments, and present open-circuit television university programs (with our own crew) using the facilities of the local commercial station. We had the problems of an insufficient number of television class people participating, limited faculty time, and the almost immediate need for a proficient organization. We chose to use the laboratory technique.

My experience training people at a commercial television station suggested an approach which we felt might help in solving some of the problems associated with the laboratory training technique. In commercial operations employees who had not had specific experience in the position for which they were hired, seemed to develop the necessary skills and techniques in an "either-or" fashion--rapidly and effectively, or very slowly and poorly. While motivations for the paid employee to acquire certain skills may differ in some respects from those of the student, it still seemed that students in a similar type of organization would have similar motivations. Moreover, many aspects of the commercial station that seemed to promote quick and effective learning of television skills and development of an efficient television organization also seemed readily adjustable to our training situation. TV programs of general interest were developed and presented to the university community over the closed circuit.

We felt that more students would be interested in an on-going television station even on the basis of a few hours a week and over the closed circuit. We believed that their interest would be more effectively maintained. Also we believed this method would mean less training staff time expended, (a precious commodity to already over-burdened people). The laboratory technique, as we organized it, was apparently successful in satisfying our needs. I would now like to outline it for you.

With the following comparative chart, I would like to show how the motivations and teaching techniques of the commercial station were transposed to suit our needs, and what we gained by making use of them. Also, maybe the chart can show something of the make-up of our closed-circuit television organization.

THE COMMERCIAL TELEVISION STATION	EDUCATIONAL CLOSED-CIRCUIT STATION
1. Employees motivated by voluntary choice of employment.	1. Students motivated by their choice of the TV laboratory as extracurricular activity. A healthy and positive attitude toward the development of the television organization resulted. At the onset of this project, the members of the group participated in the organizational and programing plans.
2. The employees of the commercial television station strongly motivated to learn, as position depended upon it.	2. Students would not be dismissed if they did not learn the skills and concepts after a reasonable length of time, but they would be given an opportunity to try another department more suited to their interests and abilities. This tended to motivate sincere effort in mastering their assignments.
3. Employees generally assigned to only one type of television work. They could therefore concentrate on that activity until it was mastered.	3. Each student, after interview, was assigned to a position in the station organization. His responsibility was clearly outlined as well as his authority in his particular activity. When more than one person was assigned to a particular position, they were assigned on the basis of a time period, or of a particular program. Thus, we maintained individual responsibility and authority (as well as training more than one crew at a time). This was felt to be a strong motivational factor in the learning process.
4. They were motivated to learn because directly or indirectly it affected what the audience saw and heard.	4. At first there was no audience at all (the closed circuit had not been completed) and after that the audience was a small one. Performance times, however, were run as if there was an audience, with strict time schedules, complete formats, including open and closing announcements, promotions, station identification, etc. Whether there was no audience or a small audience, the programs were aired with the same enthusiasm, effort toward first-rate production, and individual endeavor toward improvement of skills as had been observed in the commercial enterprise with a large audience. The audience concept seemed to be always present.
5. Individual training was given each new person for a limited time.	5. An orientation period was given each student on an individual basis. The student was instructed as to his responsibilities to his position and to the group. He was shown what his equipment was, how it operated, what skills would have to be learned, and the techniques involved in

	learning them. A mimeographed sheet was given him which included in outline form the make-up of his position and the techniques to be learned.
6. Each program and commercial was rehearsed prior to broadcast time. This facilitated a moderately high degree of proficiency for the particular skills associated with the program or commercial.	6. Due to the limits of student schedules, the rehearsal (two hours in length) was held a day before the actual closed-circuit broadcast. All programs were rehearsed in advance and until the students had reached a degree of proficiency consistent with their experience. The bulk of the instructor's time with these students was spent during rehearsals.
7. Many television programs were regularly repeated with changes in content but only minor changes in format.	7. Some educational television programs were designed with standard format but different content each time presented, and they were aired on a weekly or biweekly basis. This repetition promoted continuous reappraisal by the student of his proficiency of skills, and his advancement in them. Also it aided in the understanding of more general concepts, such as a feeling for pacing, avoidance of problems by seeing them before they occurred, and a judgment of effective picturization.
8. The ad lib television program put strong emphasis on individual initiative, teamwork, and proper execution of each position.	8. Ad lib educational programs were developed for the particular advantages mentioned. They were found to be quite successful. In addition to the ad lib program, the highly scripted show (less common in the small to medium-size commercial television station) was also used so that students could learn to take direction quickly and exactly. A drama series was developed with this in mind.
9. Advancement opportunities may follow successful fulfillment of assigned positions.	9. As one position is successfully mastered the student is given an opportunity to begin study of of another if he wishes. An interview always preceded such a change to insure proper placement considering interests and abilities. The new position might be a more complex one or just a different phase of television.

Regular procedures were established for our educational closed-circuit television station. Rehearsals usually lasted two hours, while performances ran for one and one-half to two hours in length. After the closed circuit was installed, the programs to be presented were promoted so that the university community would be able to attend. The telecast was operated primarily by the students, with the instructor guiding and advising where necessary. The instructor would direct some of the programs in order to provide new and more advanced techniques so that the learning would progress from the relatively simple to the more complex, as the situation demanded. In this way the instructor would have control over the learning situation and could control the pace of learning. After each telecast, a half-hour analysis meeting took place in order to discuss problems and advancement. This meeting was important in clarifying procedures, interdepartmental relationships, and other organizational matters. Further, we discussed openly our degree of proficiency, on an individual as well as a collective basis. Individual students discussed their shortcomings as well as their progress--mentioning problems they had encountered, as well as techniques they had developed on their own. At this meeting the instructor also discussed shortcomings and advancements as he saw them. Problems discussed on a verbal basis at this time were worked out on the television floor at the next rehearsal.

Regarding the organization of the station, a production department was set up, including producers, directors, producer-directors, floor managers, floor crew, lighting director, news and sports directors, and a production director. We also had a control operations department, including a control operations director, audio operators, video operators, cameramen, and switchers. Also we established a scenic and art department, and a traffic and continuity department. Many types of television programs were developed for audience interest, as well as to develop the various skills necessary in television. Such program types as discussion, interview, music, drama, dance, news, sports, home economics demonstrations, art demonstrations, and lecture-demonstrations were developed and aired on the closed circuit.

What then were the results of our experiment? We did interest and train a staff of over forty students (not including those who appeared before the camera). The motivations that affected the commercial staff did seem, more or less, to so affect students. Instruction staff time was limited to less than ten hours a week, usually a good deal less than that. Over one-third of the student staff-members learned to do two or more jobs. The station organization became an efficient and smooth-running one, whether an instructor was present during broadcast time or not. Student interest seemed to be maintained, as the attendance record was in almost every case perfect. It took six weeks to develop skills and understanding on the part of the students to the point where they were doing work that was interesting to watch, almost without error and delays, and which could be considered good television. We felt this was a short period of time for such a large job. At the end of the school year all staff members (who were not graduating or leaving) expressed an interest in returning to the organization in the fall.

Regarding the result that was most important to us, we were able, after a period of training of six weeks, to start experiments in closed-circuit teaching. Members of the closed-circuit station were willing and able to participate as crew in such experiments in addition to their regular positions on the station (which they, in general, insisted on maintaining). They did so in such a way that the efficient operation of the equipment could be taken for granted and attention could then be properly directed to the production and techniques of the teaching experiment and other open-circuit and closed-circuit activities.

* * *

SUMMARY OF DISCUSSION

The chairman called for a show of hands on:

How many participants represent schools where student help is employed? (Apparently all schools)

How many employ only a union staff? (None)

How many pay students? (Seemingly about half)

How many offer only credit for student help? (Four)

How many offer no credit and no pay? (Two)

How many are unable to get enough capable student help? (The vote seemed divided here among those unable to get good student help and those unable to recruit student assistance.)

The chairman tried to determine the average pay scale for student help.

About half of the participants present reported an average rate of $1.00 an hour. About one-fourth reported an average rate of more than $1.00, and five persons reported an average rate of less than $.90.

Grade-point average for students was considered in employment in ten of the schools represented. At the University of Florida, a "C" average was required.

Some had a problem of losing people after training--through graduation and loss of interest. It was suggested that the practice of moving up the good and veteran cameramen to broadcast, where such a possibility presents itself, is often a good incentive.

In several instances participants spoke of moving their competent operators up and providing directing opportunities.

Mr. Bretz felt that it was important to challenge the young creative talent. It has been his experience that some high school students have made good directors. His only reservation was that sometimes the youthful producer-director becomes carried away with his high degree of dedication and must be locked out of the studio and control room on occasion.

SECURING AND TRAINING CAMERA OPERATORS

by Sandra Thomas
Pennsylvania State University

Even the finest of directors cannot achieve a polished production with his hands tied. That is precisely the handicap he faces if he is to be bogged down by limitations of his camera crew. At Pennsylvania State University, where camera operators are students working at the job in a milieu of classes and activities, obtaining and training students for camera work is a continuing endeavor.

Few students have had previous experience operating cameras for a television studio. Those who have had the experience and who do apply for work with the TV unit of the division of academic research are hired with one important provision--the understanding that no one is exempt from the training period required to indoctrinate camera operators to our particular methods. Some students, mainly speech, drama, and journalism majors, have taken courses in basic television production principles. These students are hired knowing that their background is helpful, but again, this will not eliminate further practice on their parts.

We have not yet had the problem of too few applications for camera work; on the contrary, often many students must be turned away with just a hope of trying again next semester. Thus far we have placed but one restriction on eligibility for camera work: A student may be neither in his first nor his last semester. The first-semester student has much to do in orienting himself to his new environment and will have future opportunity to apply, and the eighth-semester student will be leaving the university too soon for the time given him in training and practice to be beneficial to us. However, this restriction does not apply in the case of a graduating senior who wants the training in order to be more qualified for a future job. When it comes to choosing the potential camera crews from a group of applicants obviously too large, definite preference is given to those students for whom camera work will be beneficial in class work and/or in career plans, particularly those students in the radio and television divisions of speech, drama, and journalism.

The number of student camera operators we hire each semester is dependent upon the number of television class hours that have been scheduled. Ideally, the two camera operators required for each class will follow their assigned class sequences throughout the semester, thus forming a team of the instructor, TV coordinator, and camera operators. Immediately after registration, applicants are asked to submit their class schedules. Each student's schedule of free hours is then correlated with the class hours to be telecast. By this method we are able to assign definite class hours--generally one or two class sequences--to each camera operator.

No mention yet has been made of remuneration. The initial goal of a student to "make money" is considered secondary in our attempt to find students who are interested primarily in the technique of camera operation and in what they can acquire in the way of training for the future. We have found that motivation of this kind provides us with more permanently interested students who will be dependable and strive for high quality work.

Upon assignment of class sequences, the camera operators are initiated into an apprenticeship period during which they participate in evening training sessions and learn camera technique while actually working their classes. Preliminary training material is included in an operational manual given to each potential operator for study.* For a good part of the apprenticeship period the student works under the direct supervision of an experienced operator. During this period, camera operators work for a total of twelve hours--generally over four weeks--for which they receive no remuneration. Those students who have completed their apprenticeships and who have displayed dependability and the potential for good camera work are then put on the payroll at a set rate for the first semester. Wage increments are then made semesterly, commensurate with the quality of each student's work.

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*Copies of the manual referred to may be obtained free of charge from the Division of Academic Research and Services, Pennsylvania State University, University Park, Pennsylvania.

Mention has been made of dependability. This point is to be stressed to the utmost. Each camera operator must be made to realize that his presence during his assigned classes is mandatory, and in case he cannot attend, sufficient notice must be given in order to appoint a substitute operator. Along with dependability, a camera operator must develop the quality to react to directions instantly and yet be constantly on the alert to plan his actions in a way to facilitate the shot-plan of the director. This quality is dependent upon the operator's knowledge of camera lenses, angles, and composition. A good camera operator is expected to receive directions for specific shots and, with this information, to position his camera, choose the lens for the prescribed shot, focus and compose the picture to the director's liking--all to be accomplished with a direction as minimum as, "Camera One: Head and shoulders on instructor."

The best camera operators, we have found, are those who have come to think of their work as that of directing the eyes of each student watching a television receiver to the pertinent information needed for attention, observation, and taking notes. With this feeling of responsibility and the ability to manipulate the camera instantly at a direction, the camera crew unquestionably unties the hands of the director--and with an adept instructor, a production team brings to the receiving screens a clear, well-organized instructional presentation.

VII. Production Techniques for Televised Instruction

PRODUCTION TECHNIQUES FOR TELEVISED INSTRUCTION

a report on presentations
by Rudy Bretz, University of California at Los Angeles
and Luther Kepler, Pennsylvania State University

Rudy Bretz opened the subject with a discussion of one-camera programs. He pointed out that one-camera shows have been done quite frequently in commercial television. These have included complex news programs and interviews. Some outstanding dramatic shows have likewise been done on one camera. Some directors have claimed that cutting from one camera to another is disadvantageous and interrupts visual continuity. The practical possibilities of the single camera pickup are considerable for instructional programs. The instructor can move from place to place to provide picture transitions.

Mr. Bretz went on to say that he believes that it is now generally accepted that microphones need not be hidden. Hiding cameras may not be necessary either, when there is reason for showing them. Nor is it "bad" for the instructor to "direct" the cameras. This can cue the audience as well as the director and camera operator, and can be handled quite naturally. A zoom lens can be a great help on a one-camera program.

Mr. Bretz recommended that, in training students in television production, a start be made with one camera. There is really no need for two cameras unless you have two subjects to cover. Where quick cutting is necessary two cameras may be desirable. He pointed out that the use of a monitor in the studio for the benefit of the instructor is very helpful in assuring him that the camera is giving the correct coverage of a particular subject--especially in close-ups. Some of the difficulties of "monitor watching" by the instructor can be avoided if the monitors are mounted on the cameras. Fairly small monitors are adequate for this purpose.

Mr. Bretz suggested that the movement of small objects into the field of the camera is better than trying to move the camera from place to place in close-ups. Try to have the instructor place small objects in the same place each time.

A small table easel for displaying cards, photographs or books, is a great convenience and can be operated by the instructor himself.

We should try to emancipate ourselves from the restrictive artistic tradition which said that the mechanics of production should be invisible. The tradition of "slick" production is not appropriate for instructional television.

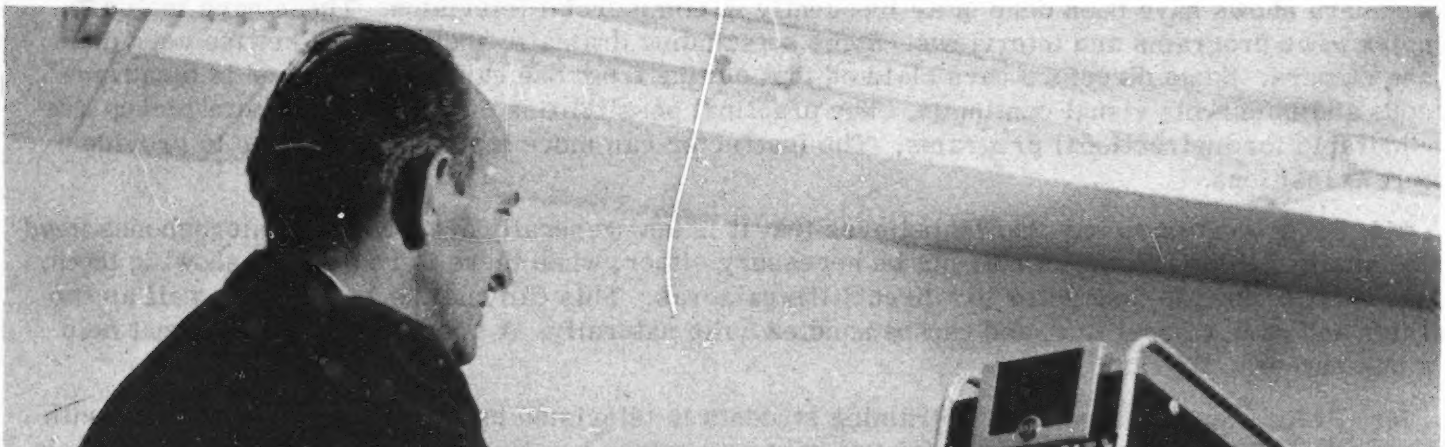
SPECIAL FILM STUDIO AT U.C.L.A.

Mr. Bretz then described a special small film studio that has been designed and constructed at UCLA for the purpose of recording lectures on film. He pointed out that there is an increasing need for the production of simple low-cost film recordings of courses of instruction. This particular studio was designed for use with a single camera which could make a continuous take of up to thirty minutes. The layout made use of several separate areas in a very confined space in such a way as to provide different backgrounds, blackboards, a demonstration area, and an area for title cards and charts. The blackboards were placed to the right of the set for use by right-handed persons.

Luther Kepler discussed some of the problems in covering a panel discussion on TV when four or more participants are involved.

It was pointed out that it is really extremely difficult to obtain good coverage of four or more people with two cameras. Rudy Bretz proposed that better coverage could be obtained with one camera, in which the camera simply panned from one speaker to the other--or with three cameras, in which two cameras were set up to get cover shots of pairs of speakers, leaving the third camera free to go in for close-ups.

A question was asked as to whether it is better for a person who is being interviewed to look at the camera or the interviewer. It was suggested that generally speaking the interviewee should look at the interviewer, unless he has something to say directly to the audience, in which case he should look at the camera.



Mr. Bretz demonstrates the use of a monitor mounted on the TV camera so that the performer can see the monitor without having to take his eyes from the camera.

VIII. Presentation Equipment

A PRESENTATION TECHNIQUE

by Vincent Jukes
Ohio University

There is wide belief that the pattern of the past in education beyond high school need not necessarily be the guide for the future. Probably none of the proposed improvements has more support or offers more potential for serving well in the broad field of adult education (as well as conventional instructional purposes) than does educational television.

In one respect, there has never been more cooperation than there is today amongst educators. We are being brought together as never before--through the medium of TV. In our search for new methods to be employed, using this new medium, we are really helping each other, especially through opportunities such as this seminar.

In our search for new ways to give more people quality education, we do not hear so much talk about quantity education as we do about new ways to bring about improvement. And improvement means but one thing--QUALITY education.

The first sputnik that rose into the air and shocked the American public out of what many thought was a complacency and a lethargy in regard to education was probably a good omen. Once again, we began to examine ourselves, to search out areas where we were lacking. This examination hit Ohio education, too--the area with which I'm most familiar.

I am not only an administrator but also one of the so-called low-level workers. Yes, I too direct productions, worry about scripts and many of the myriad other details of production. And in working at this so-called lower level or working level, I am continually looking for better ways to present educational units through TV.

One method that has proven useful is in relation to the presentation for a course called Introduction to the Fine Arts. This class has an enrollment of approximately 800 students per semester. Experimentation in presenting certain aspects of this class over closed-circuit TV proved so successful that, starting this fall, the class will be given six days a week on closed-circuit TV. It is obvious that all phases of the fine arts are revealed in such a course.

The method of presentation dealing with design is the one I wish to present here. It was felt that there should be some way by which the lecturer could trace on glass or some such medium, the basic lines in a design to show how certain designs are conceived. In order to make the demonstration more effective, the lines being traced should be superimposed on the original work, be it photograph, painting, or line drawing.

Happily, a method was discovered that proved to be highly successful. The production staff in a TV workshop built a three-sided booth painted black inside. The fourth side was fabricated to include a window frame (Figure 1). With this booth arrangement, two vidicons are used as suggested in the floor plan presented in Figure 2.

Vidicon No. 2 is focused on the photographs which are set up on a flip card stand. This is a permanent type setup and does not have to be moved, which means simplicity of operation. Vidicon No. 1 does not have to be moved so that once the setup is made, only two persons on the floor are needed in addition to control room personnel. As is shown from the Figure 2 placements, vidicon No. 1 shoots into the mirror to make the lecturer appear right side to, when he traces designs on the window glass (as he looks through the glass into the monitor placed in front of the booth). On this monitor is the image of the flip cards used on vidicon No. 2. The pickup from 1 and 2 is superimposed and this gives a very plausible method of presenting problems relating to design. This method has been used very effectively at Ohio University and should be tried by others, not only in the art field, but also in such subject matter fields as chemistry, botany, and physics. Whenever a photo or chart is planned for use and a method is needed to trace over it, the above method can be used effectively.

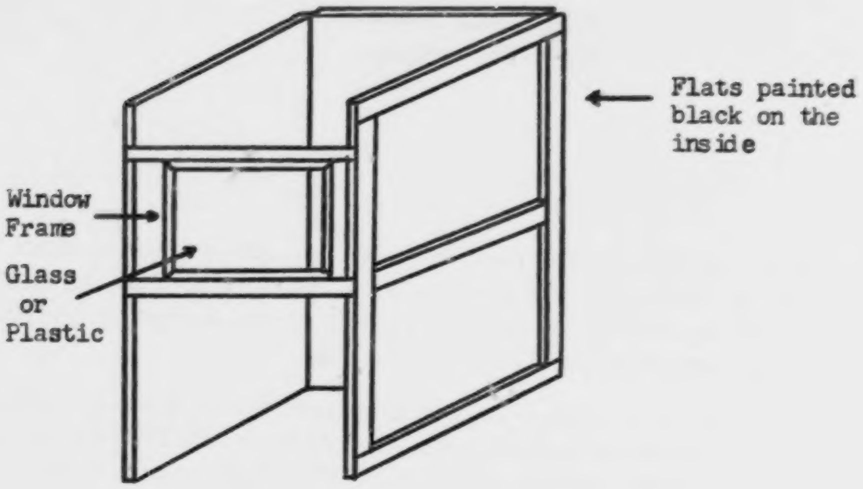

Flats painted black on the inside
Window Frame
Glass or Plastic

Figure 1

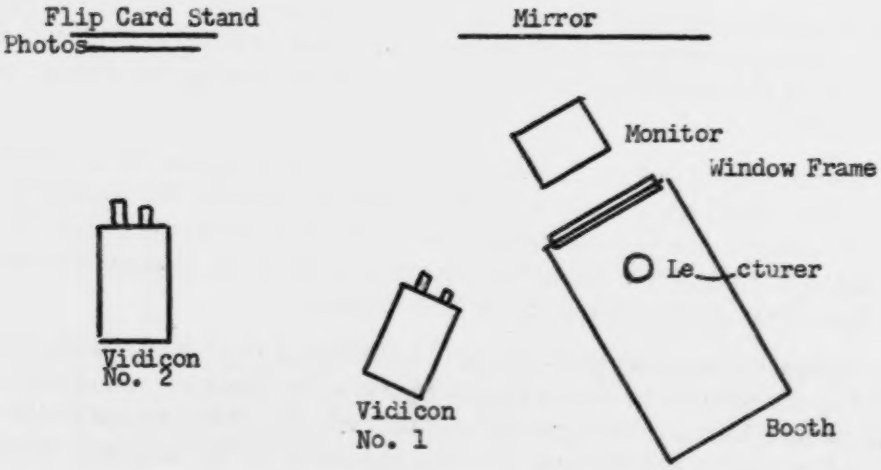

Flip Card Stand
Photos
Mirror
Monitor
Window Frame
Lecturer
Vidicon No. 2
Vidicon No. 1
Booth

Figure 2

MULTIPLE PICTURE TRANSMISSION FOR CLOSED-CIRCUIT PROJECTS

by Ralph Rosen
University of Wisconsin

The closed-circuit presentation affords an opportunity for experimentation in the use of a transmission technique which would be impossible under open-circuit broadcasting. This technique involves the use of two independent monitors for audience viewing, each carrying a different picture. These monitors are most effectively placed side by side to reduce to a minimum the shift in viewer orientation and selection, and to facilitate the viewing of both pictures simultaneously. The addition of more than two monitors adds little to communication and destroys the "stereo" quality of the dual arrangement.

At the studio end of the circuit, it is best to maintain a base shot on one camera to serve as a constant reference. This shot does not change except for normal frame adjustments. The camera is tied directly to one of the viewing monitors which remains with this shot for the duration of the program. The base shot described need not be a cover shot; for example, in an interview situation it might remain tight on the interviewer throughout.

The picture transmitted to the second viewing monitor can be cut from two or more studio cameras according to normal direction procedures. It is advisable to have at least two other cameras available to speed the second monitor if more than two people are appearing on the program or if a number of visuals are being used. The base camera is not available to the director, as it is already tied to one monitor.

A few rules that should be observed:

1. Viewing monitors should be of the same screen size.

2. Avoid wide shots, even two-shots, except for occasional orientation, as an audience of any size is too far from the screen to see well.

3. When two performers are conversing and each is appearing on an individual monitor, match size of shot as closely as possible.

4. Watch placement of props, visuals, people, so that studio right and left will correspond to monitor right and left in the viewing room.

5. In some situations there may be moments when there is "nothing going on" on one of the monitors. However, experience indicates that the viewer is selective enough to choose the monitor showing the action at the moment. Dead periods may be covered with a wide shot.

6. Is is helpful to provide the director with two live monitors in the same relative position as the viewing monitors, so he may better judge the effectiveness of his shots.

Applications of the two-monitor setup are perhaps obvious. However, some examples of possible television situations might stimulate its further use.

The simple lecture-demonstration provides the easiest ground for experimentation. A problem that often arises in the televised lecture is the use of a blackboard. In the normal classroom situation a blackboard list or diagram may be copied by the student at his leisure, as it is always before him. In the one-monitor TV situation, the student can be shown the blackboard only for that period of time that the lecturer is referring to it specifically. If the lecturer moves on to another subject without providing adequate time for the viewer to copy the information, the director must either leave a camera on the blackboard showing the outline which is now unrelated to the audio, or show the lecturer and lose the blackboard information. Of course, the time needed to copy information varies from one student to another. The lecturer might also wish to talk at some length about a visual. With the two-monitor arrangement we may see the visual in close-up and at the same time not lose direct contact with the performer. Obviously on a relatively small screen it is impossible to see both the performer and the visual adequately on the same screen--even when using a video mixer with split screen.

An interesting application of this technique was explored this summer at the University of Wisconsin. It involved a series of closed-circuit demonstrations in speech correction based on group therapy. The viewing audience was concerned with seeing the therapists' reactions to the members of the group, and at the same time seeing the patients' speech behavior. Ideally, both should have been on the screen at the same time. However, physical limitations, with a therapist and four patients, made it impossible to get tight two-shots of the therapist and four patients. The two-monitor arrangement of the course proved to be a happy solution. Two close-ups that could be seen well from the back of an auditorium were far superior to any other traditional shooting method. The base shot was a close-up on the therapist, and two other cameras alternated on the patients.

The WHA-TV staff would be happy to hear of other examples of the two-monitor technique, and judgments of its effectiveness. At the present time, we are unaware of any experimentation in this area. For those who have not considered it, we would like to encourage the application as a new approach to closed-circuit television.

[Penn State and Abilene Christian College have used similar equipment arrangements for remote observation of classroom activities.]

THE USE OF SPECIAL EFFECTS AND DISPLAY DEVICES IN THE CLOSED-CIRCUIT TELEVISION TEACHING OF LANGUAGE COURSES

by C. Wesley Lambert
The University of Texas

Language courses when presented via closed-circuit television in the mode of the typical classroom lecture situation lack visual impact and fail to utilize fully a potentially excellent teaching tool. Language is not considered a "TV natural" such as we generally experience with a science program, which is replete with opportunities for demonstrations and visualizations, and thus challenges the creative ability of the production crew.

The language course does offer possibilities for adequate visualization and demonstration, though a bit more obscure perhaps than the obvious things which can and are being done on the science programs. As always, it is the job of the television production team, and especially the director of the program, to assist the performer in the effective presentation of his material on television.

The use of special effects and visual display devices must be discussed by the director and the instructor in the early production-planning conferences. Here the director can suggest and explain the use of particular effects or devices which he thinks will do the job. Often the professor, once aware of the presentational problems, can suggest a simple and effective technique for demonstrating or visualizing the verbal material. The production supervisor is often consulted at this point for his suggestions, especially when it is evident that there is no effect or device presently available to do the job. Then a new effect or display device is designed and constructed.

Specifically, let me now discuss the special effects and display devices which we have used successfully in the language programs produced at the University of Texas.

In the teaching of conversational Spanish a "magic window" was constructed in one wall of an informal patio setting. The window frame was three-dimensional and backed with black material. A second scale window was constructed to be used as a camera matte or gobo. All of the things such as books, live actors, etc., which appeared in the "magic window" were actually shot through the matte on a second camera. Camera positions had to be carefully marked, especially if the window frames were to show in the shot, since a matched dissolve between the two windows was used as the establishing transitional device and frequently during the program. Actors were properly oriented so that they would appear to be looking at the instructor in the patio setting.

The black area in the "magic window" was also used as a straight super area for cameo and graphic material. The "magic window" was most effective; it added variety and interest to the program and permitted a flexibility in the presentation of material which would not have been possible within the patio setting. However, the use of the matte window created some problems such as the matching of shots, actor orientation--and the lack of preview facilities increased our chance for error. The effect can be achieved on a simple two bus switcher but the use of a preview monitor and keyed-insertion equipment would make it even simpler and certainly less time consuming from a production standpoint.

In the presentation of German 406 we used a more conventional instructional setting, consisting of four modular units with a free form waist-high desk. Three major visual display areas were incorporated into the setting: A 4' x 6' green surface chalkboard occupied the racked wall to the left of the instructor, with a 30" x 40" interchangeable display area, waist-high, behind to his right, and a "conjugation" chart to his far right.

Each German instruction began with a short dramatic vignette using the vocabulary of the lesson. The actors and actresses would appear either in limbo or through a camera matte which suggested, along with appropriate set and hand props, the particular setting. We have found the use of scenic camera mattes to be an extremely economical and practical means of creating or suggesting a setting.

The chalkboard, although used often, did not become tiring or lose its visual impact, since its use was carefully planned and integrated with the other display areas.

The 30" x 40" interchangeable area was actually three display areas in one: a magnetic board, a black super area, and a rear projection screen--all available for use in any given program.

The magnetic board was used to show word order in German sentences. Vocabulary words were printed in 72 point type on individual cards attached to magnets. The rapid, flexible, and graphic manner in which the magnetized words could be rearranged made it a natural for showing the intricacies of German sentence structure.

The black super area had several uses. The on-the-air picture would generally include the instructor standing beside the black super area in the set and then the visual material such as German phrases would be supered into the area. At other times cameo shots of the actors were supered into the area, showing the actor speaking a particular phrase. Another use of this black area beside the instructor was to super the actor in cameo and beneath the cameo the phrase which he was speaking. Without a preview monitor and on a two bus switcher such a three-way super can mean lots of trouble, but excellent teamwork from engineers and cameramen can pull you through. With keyed-insertion equipment and preview facilities the hazards of using this black super area would be greatly reduced.

The third use of this 30" x 40" area was for rear projections and silhouettes. Two-by-two slides were used for projection in this area because of their availability and versatility. Actors and actresses also appeared in silhouette in this area to repeat and emphasize vocabulary material.

One of the major display devices was the conjugation chart or board. This device was designed to show graphically the inflectional nature of the German language. Nouns, pronouns, and adjectives have endings which indicate gender, case, and number; verbs add endings for person and tense. Here was the opportunity to utilize fully the visual impact of television, not only to show these endings but to show them changing. The conjugation board is 18 inches wide, 26 inches high, with 1/4-inch wooden registration pegs spaced 4 inches apart across the top, a 4-inch heading space, and ten spaces 2 inches wide running down the board. Metal T-shaped aluminum edging was used to separate the ten spaces and to provide grooves so that 2-inch wide strips of 4-ply display cards, printed in 72 point characters, could slide into the ten slots on the board. These 2-inch wide strips could be of any length up to 3 or 4 feet.

The parts of the German word that do not change, i.e., the stem of the verb and the base of the noun, were printed in 72 point characters on an overlay card and hung from the pegs. The changeable prefixes and suffixes of the words appeared on the strips and were changed by moving the pull strip behind the overlay card. To show letter changes within the stem or base of the word, windows were cut in the overlay card to reveal the appropriate letters. Several sets of overlay cards and pull strips were used in each German lesson.

Special display devices such as the conjugation board for German instruction have many virtues. Learning the language is much easier, the interest of the student is held at a high level, his attention is focused on the essential information, and finally, the visual device provides the instructor with a specially designed tool for the teaching job--a tool which immeasurably increases his effectiveness as a closed-circuit television instructor and performer.

IX. Presentation Techniques

(The presentations on this topic were given over closed-circuit television.)

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SOME METHODS OF PRESENTATION OF GRAPHS, MAPS, AND OTHER VISUALS

by William L. Utter
Miami University

In producing and directing a two-semester course in American government televised at Miami University this year, it was found that several general categories of visual materials existed: key words, cartoons and photographs, quotations, and graphs and maps. The following is a brief discussion of each of these categories.

Key Words. Throughout the televised course, the students were constantly oriented to their copies of a detailed course syllabus by the introduction on camera of a key word or words from their outlines. Generally these words were printed in letters 1-1/4" to 2" high, white on black, on cards trimmed nearly flush. The cards or strips were then attached to the back wall of the set with a clip. As a transition was made by the instructor, a camera change was made to show the key word over the instructor's shoulder. These words were either changed by the instructor, if a quick succession of terms was desired, or, after changing cameras, they were removed and/or replaced by the floorman. It was felt by both the instructor and the director that this was an effective method of keeping the student constantly oriented.

Cartoons and Photographs. As the plan of the course included considerable discussion of current events, the inclusion of contemporary photographs or political cartoons was found helpful. These presented no problem in terms of production. Method of presentation was placing such material on an easel for a free camera. Frequently cartoons were used to reinforce points in the body of the course material. Such cartoons were reproduced photographically by Miami's audio-visual service on 9" x 12" acetate cells and mounted in frames, for more permanent use and storage.

Quotations. Frequently the instructor found it helpful to quote at considerable length from one of the articles of the Constitution, or some other public document. To supply a visual orientation to the student, the quotations were frequently televised as the instructor read them. The method used was as follows: With red or black wax pencil, the quotation was hand lettered by an artist--using fairly rapid technique--on a roll of celluloid. The resulting transparent crawl was then pulled past a rear-illuminated ground glass plate. The advantage of this method over a drum-mounted crawl was the ease which the artist found in rapid lettering with wax pencil on celluloid. Also such material is easily stored in inexpensive mailing tubes.

Graphs and Maps. If there was any noteworthy innovation in the production of this televised course, it was probably in the handling of graphs and maps. Due to the nature of the course content it was found that a number of rather complex graphs and maps were necessary. The method of having such materials reproduced by an artist on large cards, or reproduced by photographic means was acceptable, but did not fulfill one important demand: allowing the visual presence of the instructor to explain and interpret. It was felt that if the material could be expressed in a large enough field, the instructor could physically stand beside or even within the graph or chart, and explain in a more effective manner. The nature of the set wall suggested a technique, which was developed in collaboration with Chester Davis of Miami's audio-visual service. The method used as a basis heavy black knitting yarn for all outlining. By using dark-colored golf tees as outline posts, practically any non-circular shape could be expressed.

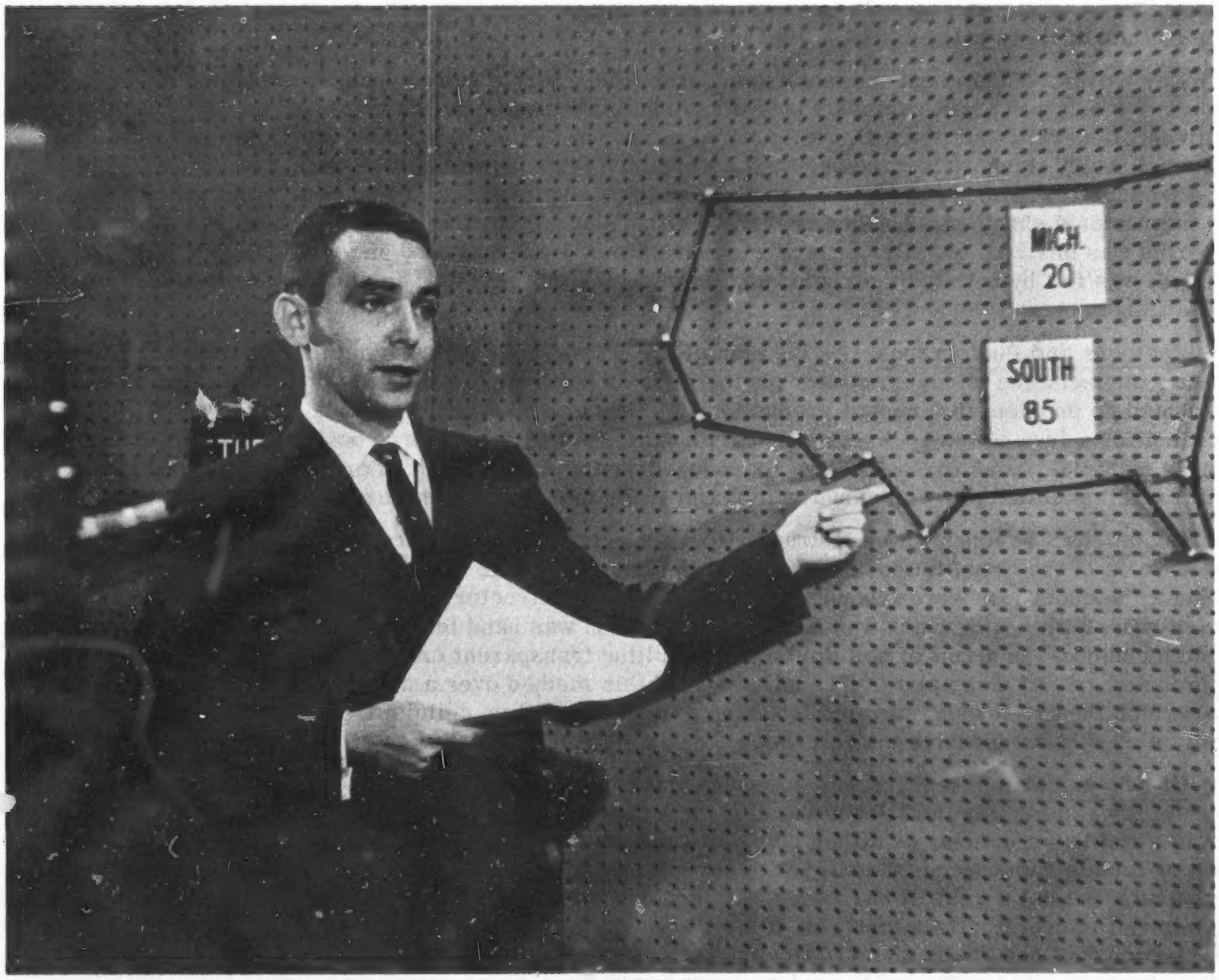
For example, the placing of twenty golf tees in the prominent points of the outline of a map of the United States allowed winding the yarn from tee to tee, so that a somewhat stylized, but recognizable map of the United States resulted. It was found that four turns of yarn around the map were necessary to give a sufficiently black outline. The necessary information within the map was printed by

Embossograph on black flush-trimmed cards, similar to those used in the key words, above. These cards were either preset by the floorman, or added, as the lecture progressed, by the instructor. Masonite hooks, #146, were used for fastening to the pegboard.

In the case of graphs, vertical or horizontal information cards were preset on the pegboard, and the lines of the graph drawn in a manner similar to the outlining of the map, using golf tees and yarn.

A variation on this technique was used in the presentation of charts intended to show "chain of command" or other relationships. It was found workable to fasten a weight to the end of a length of yarn, suspending the weight on the rear of the set wall. The other end of the yarn was then pushed through the pegboard and fastened to a golf tea. At the time the instructor wished to "draw" a line, he pulled the yarn by means of the tee; the yarn being held taut by the weight from behind the set.

In conclusion, an attempt was made in the production of this particular course to provide a variety of approaches to visual reinforcement, with particular attention to on-the-air flexibility.



--photo by Donald E. Schein

Mr. Utter shows how he can get an inexpensive rough outline map, using pegboard, golf tees, and yarn.

PRODUCTION TECHNIQUES APPLIED TO TEACHING OF SCIENCE BY TELEVISION

by Kenneth P. Murr
Pennsylvania State University

In presenting any science course, whether by television or in a "live," face-to-face situation, it must be recognized that there are certain basic and essential needs that are common to that area of teaching. Among these are the need to demonstrate correct scientific procedures, including the manipulation of certain special tools, instruments, etc., in order that students might apply these procedures in their laboratory groups; the necessity of giving each member of the class an equal opportunity to examine small and often microscopic objects and organisms in order to learn identifying characteristics and behavior patterns; and the necessity of acquainting students with the greatest possible number and variety of samples and/or examples of related scientific phenomena in their natural environment, so as to present a clear picture of the particular science in its many ramifications.

Of course, there are many more such "essentials" to apply to a science course, just as there are in any other area of teaching. Those mentioned above, however, are vital to those of us involved in closed-circuit TV instruction, for it is by meeting these needs in a superior way that television can prove to be an outstanding aid in the teaching of science.

For the past three semesters at Pennsylvania State University a course in zoology (Zoo 25, "An Introduction to Zoology," Dr. T. H. Cheng) has been presented via closed-circuit television. During one of these semesters this course was simultaneously broadcast over a commercial station in Altoona, Pennsylvania. In studying results of Zoo 25 by means of student responses to questionnaires distributed at the close of each semester's work, it has been found that the students definitely prefer this course offered on television, rather than in large "live" sections or small sections taught by graduate students. Many students have expressed, in person and on the questionnaires, extremely favorable opinions concerning television's effectiveness in presenting close-ups of small objects and in offering an excellent view of the activities and characteristics of specimens in all shapes and sizes. In general, the students in Zoo 25 praised the ability of the television camera to project a large, 24-inch picture of the tiniest action and of the most minute living things for all to see, study, and comprehend.

Perhaps it might prove beneficial to describe briefly the production procedures that have proved successful in televising this zoology course. Because the televised class met just twice a week for fifty minutes, both instructor and student soon realized the need to use every minute to best advantage. This televised portion of the course was just as important to the students as were the non-TV laboratory sessions which followed at later times during the week. This was the instructor's formal lecture session, the time when the all-important basic principles had to be presented and the proper foundation had to be laid for the laboratory periods to follow. To assist the instructor in saving valuable time, various visual aids were set up around the studio the evening before the 8 a.m. class. This was usually accomplished by one or both of the student camera operators assigned regularly to "work" this particular class. As might be expected, setting up the studio under the instructor's direction made the cameraman's job considerably easier when it actually came time to televise the lesson.

The instructor nearly always worked from a long table which was elevated by means of 6-inch blocks of wood under each leg so as to provide the best camera angle for the table top. Most of his demonstrations were performed at this table, and with a complement of four lenses the cameras were able to offer the students--viewing in other rooms--the biggest, clearest possible picture of the most complicated manipulation. Behind the instructor were two large blackboards--one movable--to provide writing space. Incidentally, the problem which arose earliest and which seemed to take the greatest amount of effort to correct was the need for the instructor to pause for a satisfactory length of time immediately after making a notation on the blackboard. This allowed the camera time to "hold" on his notation while the students copied the essential information.

An important technique involved the inclusion of a third camera mounted in one corner of the studio, in front of which a student assistant placed flip-cards with various zoological terms printed at the bottom. These terms were arranged in their correct order by the instructor before each class and were superimposed at the proper time. This proved highly successful in drawing attention to certain technical terms and phrases, demonstrating their correct spelling and also saving the valuable time of the instructor by eliminating the need for writing each term on the blackboard.

Another equally valuable visual device was the rear-projection screen on which various 2" x 2" slides were flashed. These slides pictured various stages of nature cycles, characteristics of various diseases in humans as well as in specimens, and were arranged beforehand so that all the instructor need do was walk over to the screen (to one side of the studio), reach behind to the slide projector, and turn on the desired image. Then, with his pointer, he could indicate various areas of interest while a camera would show a view of the entire slide or close-ups of parts of a slide. It was found that a 500-watt lamp in the projector provided the ideal amount of illumination for television pickup with vidicon cameras.

Perhaps the most valuable aid or device was the microscope with its special attachment for camera viewing. By means of a special beam-splitting eyepiece attached to the microscope, the camera operator was able to position his 1" lens so as to "look" down into the instrument and transmit a clear image of whatever specimen was under observation. At the same time the instructor could look through a second eyepiece in order to position the specimen. By moving the stage, and using a built-in pointer, the instructor could direct the viewer's attention to any area of the slide he desired.

It might be well to mention, at this point, two other methods for viewing a microscopic image over a television system. Besides placing the 1" camera lens directly in contact with the eyepiece or ocular of the microscope, it is possible to use a projection microscope which projects its image onto the back of a rear-projection screen, enabling the students to view this image much as they would the regular 2" x 2" slide previously mentioned. This microscope requires considerable illumination in order to throw a picture onto the screen with enough intensity for the vidicon camera to pick it up. (This method works well with I.O. cameras.)

Another method of televising through the microscope is by direct projection onto the face of the camera pickup tube. The lens is removed from the TV camera and is replaced by a short tube to exclude stray light. The microscope, equipped with a projection eyepiece, is aligned with this tube and an image is projected onto the face of the vidicon tube. In all methods of televising through the microscope, correct alignment of the light source with the optics is most important.

One other production device often used in Zoology 25 was the integration of film-clips in the course of the lecture. It has been found that in zoology, as in many other similar courses where experiments of one kind or another are demonstrated before the TV camera, it is often less expensive and less time consuming to make a short, low-cost film of a demonstration for showing at the appropriate time.

These, then, are the production devices used at Penn State to answer what I believe are three basic needs of a televised science course. Through skillful integration of these visual techniques via closed-circuit and broadcast television, the science instructor can demonstrate correct procedures, can offer each student an equal opportunity to view the smallest object, and can hold up to the camera's eye an infinite variety of objects and specimens each in its own natural environment.

Zoology 25 has undoubtedly offered Penn State closed-circuit television some of its greatest challenges, but the results have been most gratifying.

PRODUCING SHORT FILM INSERTS FOR INSTRUCTIONAL TV PROGRAMS

by Delmer P. Duvall
Pennsylvania State University

The use of filmed inserts can often enhance, expand, or clarify certain elements of a live TV presentation. Here at Penn State we have found them to be useful in a number of fields, with the zoology department perhaps being the most frequent user. They have had recorded on film experiments which are lengthy, difficult to perform, sometimes erratic, expensive to repeat, and which cannot readily be brought into the TV studio. Films commonly illustrate one or more salient parts in the day's lecture.

These films are short, varying from a few seconds to a few minutes. They are generally without sound tracks. Usually formal openings, such as titles and introductory shots, are omitted. Endings, too, are abrupt. Only the essential material is included. The avoidance of special effects is partly an economy measure and partly so the film can be integrated unobtrusively into a lecture-demonstration program. For example, one of the film inserts to be shown later is a blood-typing experiment. In the TV studio the demonstrator sterilizes a lance and prepares to take a blood sample from his finger. At this point the movie commences with a continuation of the action. The conclusion of the filmed demonstration is a microscope's view of the blood specimen. As the film ends, the live TV camera picks up the demonstrator at a microscope. The continuity from live, to movie, to live action is thus so smooth, that it is difficult to detect when observed on a TV receiver.

Producing filmed TV inserts is neither technically difficult nor costly. Several clamp-on flood or spot lights, tripod, 16 mm camera with reflex finder, splicer, viewer, and rewinds are about all the equipment needed. The use of fast black-and-white films, either negative or reversal, enable the cinematographer to light the subject quickly and economically, yet maintain adequate picture quality.

Since the subject matter usually requires a documentary or factual treatment, there is seldom need for a written script or shooting outline. Assembling the film, or editing, with newsreel-type footage is not a difficult task. Paying due attention to orientation, clarity, and timing of the shots is about the limit of editing procedure.

Costs are dependent on the amount of film exposed and printed. Here it averages about $5-$7 per minute for silent black-and-white films.

Several examples were shown on the TV system, including the circulation of blood cells in the capillaries of the tail of a goldfish.

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PRODUCTION TECHNIQUES IN THE PRESENTATION OF BASIC ECONOMICS

by Ronald A. Black
University of Detroit

In this paper I will attempt to explain to you some of the unusual production techniques used at the University of Detroit in presenting a college credit telecourse entitled Basic Economics.

The points I intend to cover are:

1. The extensive use of superimposition, both still and moving, as an easy and effective way to convey information.

2. The use of specially built three-dimensional objects as an aid to the understanding of certain basic economic concepts.

3. Using the magnetic blackboard as a base for the movable chart or graph.

4. Making use of the small rear projection screen as a display area for charts via the 2" x 2" slide projector.

In preparing for this course in Basic Economics, we were aware that our two-camera show in the fall semester of 1958 would become a one-camera show during the second semester, when it was scheduled to run on one of the local commercial stations as part of the continuing series, "TV College."

We thought at first that we would devise all graphics so that they could be used both semesters, on a one-camera as well as a two-camera program. Indeed, many of the graphics were able to be used again, but we soon decided that trying to develop material which would be as effective and meaningful in each instance left us without the opportunity to attempt many things for our own two-camera program. Consequently, we did not give predominance to re-usable graphics, but rather used what we felt was the most effective means of presenting the material, and if this happened to be of use the next semester, that was fine. If it couldn't be used, then next semester we would have to design something else to do the job.

The Superimposition. We found this to be one of the best techniques for presenting certain types of information. Certainly, we supered words across the talent's chest, down the side of the screen revealing one point at a time and did "pull graphs," but we added a few new wrinkles. Early in the course we wanted to define some of the often-used terms in the course, so we went back to the breakdown of the syllables to find the derivation of some of the words. To aid in this presentation we used what we called the "snapper-super." Each word was broken down into syllables, each syllable printed separately, and black elastic thread attached to each piece. Unstretched, the word was supered as usual--then when the thread was pulled, the word broke apart into syllables.

Another unusual use of the super came about when we were confronted with the problem of wanting to see a graph built from the original right angle axis to a point where there were four curved lines on the graph. Since many of them cut across each other at certain places, a simple build-up card with stick-ons would be rather bulky. So we decided to experiment, doing it as a super with clear acetate overlays. After a little effort to find a paint which would adhere to the flexible acetate without chipping easily, we did it as a super flip. The result was very satisfactory. These are but two of the unusual uses of the superimposition with which we were pleased.

Three-Dimensional Objects. Two particular examples of the use of three-dimensional objects stand out in my mind. One was the result of a particular concept which the instructor felt was essential, but which, he admitted, seldom got across to the students. It dealt with the production plane curve, and the usual presentation was a bisected drawing in the book. This didn't show that the curve was the same no matter at what point on the curve you started. What we came up with was a clay model which was shaped roughly like a cone, but which came apart two ways vertically, and one way horizontally. The instructor's reaction to the effectiveness of this model was striking. For the first time, according to him, the students grasped the idea with little doubt or confusion. He now uses the model in his classroom.

The other example I think of concerned a problem in illustrating how money in a bank is used as a base for loaning over five times the amount on reserve. We had to involve not only the local bank, but also the Federal Reserve District Bank and show the complete cycle. Our solution was a set of so-called "building blocks" which were all proportional from a starting amount of money, and which divided to show what had to be kept in reserve and what happened to the reserve. Each block was labeled as to the amount it represented, and each divided block had the new amount of the money indicated on it. This presentation, coupled with the traditional method--the blackboard diagram with its many arrows showing transfer of funds--also put the point across clearly, and relatively simply.

Magnetic Blackboard. Knowing we would need a blackboard at times, we incorporated one into the set. However, it was used mainly as a magnet board. We found it ideal for graphs which had a line that changed. All it needed was a different line of the correct length or the moving of a present line. It also was very effective with the build-up chart, where you could concentrate on the one point and not be ahead, looking at the next point, until the instructor was ready to present it.

Slides on Small Rear Projector. We used the small rear projector screen to show some charts. This was a simple and efficient method of handling some of the material. We were able to super over or add to the information by using a second 2 x 2 projector next to the first one. By plugging the projector into an outlet controlled by the light board, we could pre-set the levels of intensity required by each. With this device, you can also dissolve from one slide to another. We have used as many as three projectors to achieve the results we were seeking.

These are some of the production techniques used in presenting Basic Economics, a college credit telecourse on Channel 56, by the University of Detroit. We felt it was an effective course. During the second semester, it was presented on a commercial VHF station at 7:00 a.m. five mornings a week for fourteen weeks. The results of this wider audience were quite spectacular. Over 100,000 people watched the show each day. Both General Motors and Chrysler instructed their executives to view the program.

We at the University of Detroit feel that these results came about because of the production-instruction team effort which attempted to utilize television to its fullest extent as dictated by the needs of the content to be presented. This is instructional television, not merely televised instruction. There can be a world of difference between the two concepts. As Richard J. Goggin of New York University said, "Instructional television takes primarily imagination, dedication, ingenuity, long hours, hard work--and only lastly some money." In another article he says, "[Televised instruction] is the easy way out; this is the hard way in."

THE USE OF PROJECTED VISUAL MATERIALS FOR CLOSED-CIRCUIT TELEVISION

by William H. Kroll
Indiana University

Instruction by closed-circuit television demands the ultimate in coordination between production staff and the educational consultant or teacher. It seems to be evident that the good classroom teacher can be an effective television teacher as far as personality and showmanship is concerned. Needed for effective presentation via television is the condensation of verbal communication and the increased use of visual materials. The dividing line between broadcast television and closed-circuit television is not wide. Equipment is similar, the audience has been conditioned to a certain amount of finesse in production techniques, and the content to be considered for presentation is not too different from some similar commercial ventures into the area.

Technical limitations are few but of the utmost importance. The factor of resolution is to be reckoned with. The aspect ratio of 4:3 has to be considered in all stages of planning and the demand for high quality sound cannot be overemphasized. These problems are difficult but can be solved without too much concern, if the necessary funds are available to provide adequate facilities and equipment.

The major problem in television instruction is the current neglect of visual presentations. Perhaps the cliché "A picture is worth ten thousand words" has been overworked but it has some merit. Pictures, in the above quotation, mean not only pictures, but also charts, diagrams, maps, and the like.

Visual materials of the projected type have been used most satisfactorily in broadcast television for both commercial programs and educational instruction. Transparent materials are the most widely used and have been developed to a degree of professional quality in many installations.

Included in the transparency category are the slides. They may range in size from 2" x 2" to 4" x 5" with equipment for projection being the determinant of size. Film strips are included in this group because of the type of projector used. The Polaroid transparency is very capable of producing extremely good pictures and is very fast. Cost of individual slides makes the use of Polaroid transparencies very limited. Another type of transparent material which can be utilized with the overhead projector is the acetate cell, the lift-process cell, and photographs using high-contrast and continuous-tone film.

Projected visual materials can be used by the instructor who operates the equipment himself, or who is aided by an assistant. Front projection--where the projector is seen by the audience and manipulated by the instructor--can be accomplished with little trouble and needs only a screen. Rear projection is accomplished by using a translucent screen and setting up the projector behind it. In this situation the instructor needs an assistant to operate the equipment. This is one instance in which the television camera has a distinct advantage. Even though the screen may be 9' x 12', the capabilities of the camera enable it to produce a highly resolved picture of the rear-projected material. In this instance the instructor is free to move about the studio and can be concerned with details other than the projector operation. With minor equipment additions, projected materials can be operated from the control room.

The limitations of using projected materials in closed-circuit television instruction are restrictive only by the limitations of the resourcefulness of personnel. There is a wide variety of commercially produced materials which can be used most effectively. Original material designed by the instructor with assistance from the production organization can be utilized with optimum success. It includes not only the instructor's already prepared materials but those which can be made specifically for the program.

The use of 2" x 2" slides is perhaps the most common. Practically everyone owns a camera capable of producing these slides and in color or black and white. The cost of such a production tool is very slight. They can be used in various ways and are not limited in sequence as is the film strip. Glass slides--3-1/4" x 4" and 4" x 5"--are used when larger projected images are desired. These slides also need another projector for their use. This size can be used very effectively when a large area is to be projected on rear screen.

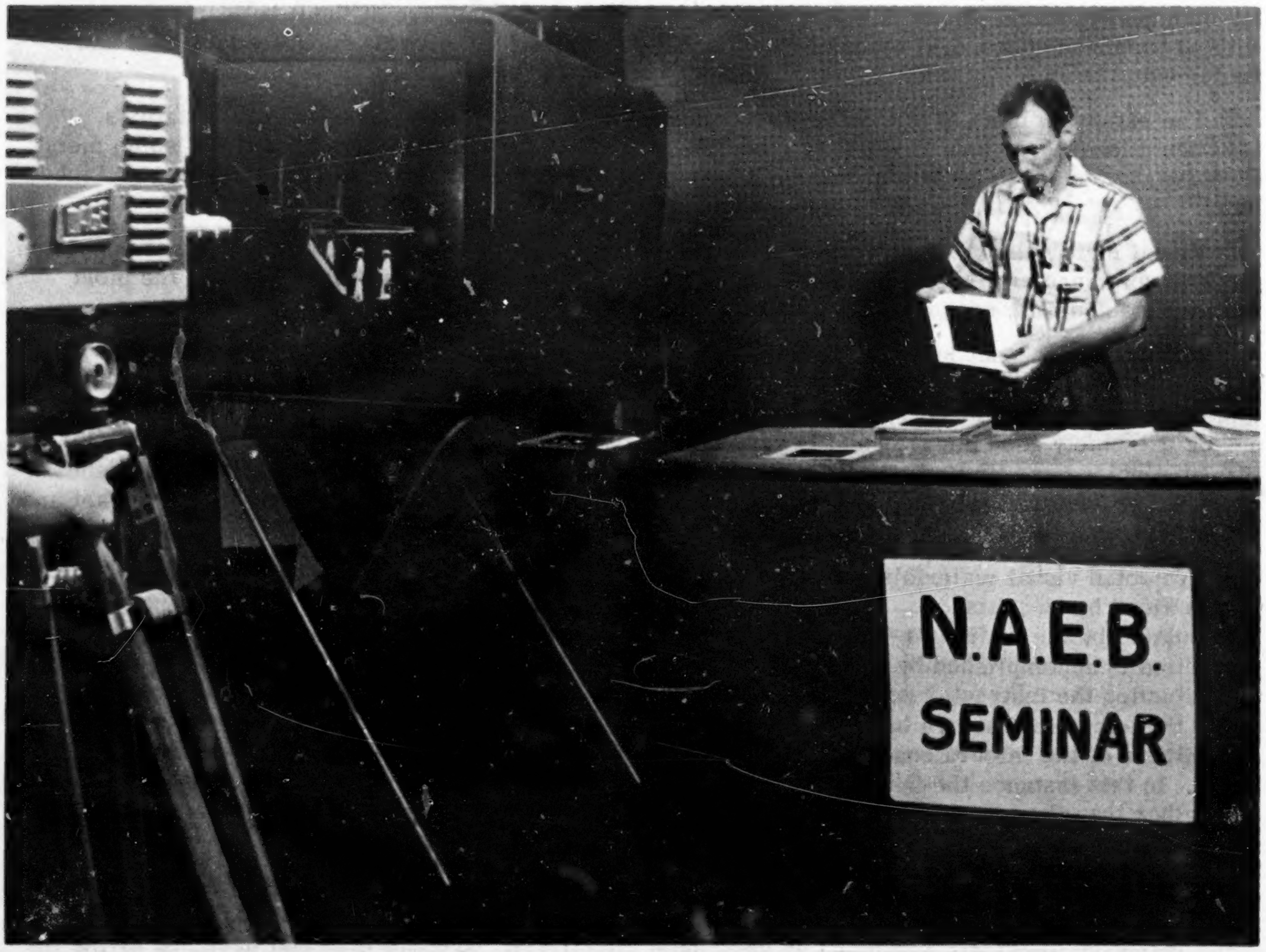
The overhead projector and the transparent materials used with this piece of equipment have just come into the fore. This method of presentation is the most versatile of all. Transparencies of all sizes and shapes may be used. Visual materials may be manipulated by the instructor or by an assistant. Inexpensive production materials can be prepared with little time and effort but result in a most effective presentation.

There is a process whereby pictures or other visual materials may be "lifted" from magazines and other printed media. There is no problem of copyright in the classroom. High-contrast photography for line drawings, maps, charts and graphs--and continuous-tone photography for all other materials can be readily accomplished with little equipment.

Since the material for the overhead projector lies flat, there is no need for elaborate mounting techniques. Masking can be accomplished very simply by using pieces of cardboard over the flat surface.

Simple animation can be done by using two or more acetate cells, and a new process called Technamation can show flow lines by the use of polarized light.

Closed-circuit television can and will be an effective means of instruction when and if those who are concerned with its potential realize the merits of a good visual presentation with a high-quality sound system as a supplementary and explanatory subordinate.



--photo by Donald E. Schein

Mr. Kroll demonstrates the use of projected visual materials over closed-circuit television.

TV PRODUCTION-- IN A NEW ENVIRONMENT

by Gordon Tuell
University of Washington

From the earliest days of television broadcasting, some twenty years ago, in spite of the newness of their medium, television producers have been faced with the problem of either living up to a precedent or, in some cases, overcoming it.

To the viewer, watching his television screen at home, it represented only a scaled-down version of the screen he was accustomed to in the local motion picture theater. It was only natural that he should expect a similar sequence of visual information to appear there. This conditioned reflex forced the television industry to develop, at the very outset, a facility and a technique which could produce, instantaneously, a succession of visual material which would be similar to, and compare favorably (at least in the eyes of the viewer) with a finished film feature from the Hollywood studios. The viewer was not concerned with the fact that the Hollywood product represented several months of shooting and reshooting, clipping, discarding and editing, as well as dubbing in, pre-recording, and re-recording the sound track.

In a remarkably short time, the standard multiple-camera TV operation--directed, coordinated, and selectively used at will from a central control point--met this challenge, and has gone on to establish new techniques of its own which were either not thought of or not possible in film production.

Now television looms larger and larger in the field of education as a unique and powerful tool for the dissemination of information, which in some areas has already made possible an upgrading of educational processes on a more universal basis than has ever been accomplished before.

It is a very natural thing that as educational stations and closed-circuit operations began to spring up around the country, production and technical personnel from the commercial field were called upon to furnish the specialized knowledge necessary to get this new gadget into useful operation.

It is likewise natural that the first inclination of these people was to duplicate in this new operational environment the principles and the techniques of good operation and production which had been successful in the commercial situation. However, five or six years of practical application of those principles and techniques in these new and different surroundings have proved that some of them are not good at all and others need a good deal of adjusting.

It has been my experience that, in a broad way, the things that tend to make production for educational television different from commercial fall into three categories. Starting with the least important, they are: the studio crew, the talent, and the audience.

The studio crew. It must be recognized that the problem of crew quality and turnover varies greatly from one operation to another, and from the closed-circuit to the open-broadcast situation. However, not infrequently, camera, floor, audio, and switching positions are handled by student (or even volunteer) personnel. Sometimes this is on a rotation basis, which means that from program to program in a series the crew people change positions from week to week and never get an opportunity to get a good feel for the demands of one position or another. This situation, in some cases, is further aggravated by the fact that a whole new student group takes over for the old one at the beginning of each school quarter. Even in cases where hired crew help is available, the pay rate usually is less than offered in the commercial field, leading to frequent replacements and the associated problems of breaking in new people.

This means that the producer-director in educational TV must shape his production planning according to the limitations and experience of his crew. In many cases this curtailing factor may be a blessing in disguise, as it forces the producer away from the urge to overdo the use of complicate and sometimes distracting gimmicks which usually serve no useful purpose in educational broadcasting.

The difference in the talent. Here the ETV producer is faced with one of the toughest hurdles Instead of a professional performer who knows his way blindfolded in the medium, and who has bee selected because of his proved ability as a performer, we must attempt to guide, to coach, to put a ease; sometimes to create, or at least to rescue, a spark of personality in a teacher who probably has never appeared before anything but a small classroom of familiar and responsive faces. Frequently this person has been selected by a committee of capable but non-TV-wise superiors on th basis of a good classroom record, or even simply availability, rather than aptitude for, or tested fectiveness in, television performance. This additional production burden necessitates a whole ne look at the pre-program planning and rehearsal schedule, and demands that the director not only g an earlier start at the job, but that he take on the role of counselor, psychologist, and drama coac as well as producer--if he expects to come up with a program that will be effective when it reache the eyes of the viewer.

The audience. No matter what your situation, closed circuit or open, college level or grade school, the audience becomes a guiding factor that dictates a new approach to production technique This is brought about by two things. The first is the very specific age group which must be serve The tailoring of material to the needs and capabilities of a third-grade or a seventh-grade audienc in such a way that it will stimulate the slower members of the group but not be dull and uninspirin to the more capable students is a very ticklish business. In solving this problem the director mus depend heavily upon the judgment of his talent, and, if available, the counsel of the school system' television coordinator (who fills a role comparable to the agency representative of commercial T

The greatest call for ingenuity on the part of the ETV producer comes in the second phase of "audience" problem and centers around the physical relationships involved in the typical classroo viewing situation. This relationship starts with the 21" TV screen which has generally been acce as the standard for home viewing. Industry production techniques have been aimed at achieving th optimum effectiveness from that 21" surface in the average home viewing situation, with a maxim of six or eight viewers comfortably seated approximately twelve to fifteen feet from the screen. this same 21" screen in a classroom of thirty or forty youngsters, some of them as much as thirt feet away, and these carefully worked out techniques no longer achieve the desired results. The o reliable "establishing, to medium, to close-up shot" sequence becomes meaningless to Johnny in t back row when the "establishing shot" is an undiscernable jumble of light and shadow. In many vi ing situations, even the medium shot is difficult to appreciate. Thus we are forced more and mor the use of close-ups. At first glimpse the solution may appear to be as simple as that, "Just stick with close-ups." However, in practice this close-up to close-up sequence makes the association o ideas more difficult, and the relationship of the performer or demonstrator to his props and mate awkward to establish.

It is not my intention, at this time, to offer solutions to these problems. The purpose of these servations is to guard against the easy but dangerous attitude that "television is television," and " it worked in the commercial field it should be OK for kids in the classroom." We must rather recognize the fact that there are basic differences in this new realm of television which demand a careful reshaping of established production techniques.

X. A Case Study

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PRODUCTION TECHNIQUES FOR "CONTINENTAL CLASSROOM"

a report on the presentation by Robert Rippen
National Broadcasting Company

Mr. Rippen began his report on NBC's educational physics series on "Continental Classroom" by outlining, briefly, the various duties of the production staff of this program. The five full-time NBC staff members include Dorothy Culbertson, executive producer; Mr. Rippen, producer; Marvin Einhorn, director; an assistant director; and a stage manager.

Mr. Rippen went on to say that funds for the program series come from grants to the AACTE from various industrial corporations, as well as the Ford Foundation. However, a new organization, called Continental Classroom, Inc., is presently being formed to assume the continuation of the programs. As soon as this organization is put into operation and takes over control of the series, Mr. Rippen stated it will make the tape recordings of its instructional programs available to other stations or educational institutions as desired.

By way of a sidelight, Mr. Rippen made some general comments concerning the effectiveness of closed-circuit television. He noted that, contrary to what many would like to believe, "Continental Classroom" is, after all, pure classroom instruction carried over a broadcast channel, and is a good example of just how effective instruction can be if presented properly. He went on to say that to many the connotation of closed-circuit television is that it is simply not as good--nor can it ever be as good--as network television. This idea must certainly be avoided, said Mr. Rippen, if closed-circuit TV is ever to be used to its maximum effectiveness. From what he has seen, he said the best work being done presently on CCTV is comparable to anything being accomplished over network television from the standpoint of instructional effectiveness.

Getting back to more specific comments concerning "Continental Classroom," Mr. Rippen related some experiences he has had with guest instructors. Out of a total of 160 lessons in physics presented in this series, 42 were guest lessons given by 33 different guest instructors. None of these 33 had previous television experience; one had limited film experience. These guests, ranging in age from 30 to 65, were allowed to prepare and present their lecture format as they desired, and they were told that they were to "carry" the entire program themselves--from the standpoint of lecture material--from start to finish.

A typical method of "handling" a nervous, often frightened, guest instructor was outlined by Mr. Rippen. He stated that after an invitation to appear on "Continental Classroom" had been offered and accepted (usually from 6 weeks to 2 months prior to date of recording the program for broadcast) the next step was to make a preliminary telephone call to the guest. Usually Mr. Rippen and/or Professor Harvey White would call. By this time Mr. White had generally discussed the subject matter with the guest in separate correspondence. By means of this telephone conversation, such things as methods of visualization, equipment to be supplied by the studio, and various photographic and art facilities available were discussed.

Approximately one month before the scheduled program, another telephone call to the guest would serve as a check on how preparations were proceeding. By this time all material that the instructor would be using should have been sent to the New York studios. Mr. Rippen would also check with the guest at this point to verify time of arrival in New York, the rehearsal schedule, and such things.

On the day for recording the program, a schedule something like the following was put into effect:

9:00 a.m. to 12 noon: All participants meet in an office apart from the studio to discuss general routine and approach from production standpoint. Producer and director point out the importance of keeping entire presentation as simple as possible. Floor plan is drawn out and guest is given all the information possible about the type of microphone he will wear, how the opening and closing will go, how he will need to look at the center camera in a three-camera arrangement, the number and types of cue cards he should prepare for himself, with an outline of the demonstration sequences, etc.

At this time the guest is told that there will be one dry rehearsal for production timing and camera movement, and that when taping starts, it must be a continuous process with no starts and stops. Also, the director at this time may wish to look at any graphs, charts, or small demonstrations the guest may have prepared.

After lunch, it is time for the first move into the studio.

2:00 to 4 p.m.: Rehearsal. Camera blocking begins, as all experiments are run to completion. All the artwork and blackboard drawings are checked out. All the visual displays are placed on easels on a table to be handled and controlled by the instructor himself. Then the entire show is run through for timing.

4:00 to 4:30: This time is generally given over to the engineers for camera and equipment checks, so the instructor is led--often unwillingly--to the make-up department. This five-minute task usually proves much less painful than expected.

4:30 to 5:00: The program is taped.

Mr. Rippen stated that with this set schedule, guests usually were well prepared mentally by the time the program was ready for taping. In fact, Mr. Rippen pointed out that they never had to tape a program a second time.

Some general production techniques which Mr. Rippen found would produce maximum effectiveness were such things as talking to the middle camera only, stressing establishing or orientation shots, avoiding angle shots whenever possible, few or no dissolves, using no zoomar lenses, and showing as many tight close-ups as necessary, often bringing a camera into the picture. The importance of a simple, noncommercial treatment of the production was stressed. Only the opening and closing of the program could be called "commercial" in any way. There were a few occasions when a split-screen device was employed in order to show an experiment in progress and a meter or graphic reading being produced at the same time. Usually, for the audience's sake, the split-screen effect was explained by Dr. White or the guest.

In his closing remarks, Mr. Rippen stressed the responsibility he felt he had to the guest. Because he is a layman to television, the guest will generally do anything he is asked. Therefore, a good part of the success or failure of the presentation depends on the astuteness of the producer and director. They must be aware of the limitations of an individual new to television. They cannot burden him with a gimmick-laden "show," but rather must capitalize on his ability as a physicist and a teacher to present a simple but effective television presentation.

* * *

SUMMARY OF DISCUSSION

Questions from the floor were addressed to Mr. Rippen.

Q. Are techniques tried out ahead of time?

A. Most of them are not.

Q. Is it possible to use a filter on the lens to dull white cards?

A. Engineers don't like to use filters because it dulls everything else as well.

Q. Can you provide a comparison of the amount of preparation needed for Dr. White and for guest lecturers?

A. Rehearsal time was about the same, as Dr. White is very meticulous.

Q. Would you do complex experiments with guests as you would with Dr. White?

A. Yes, occasionally, but most of the more complex experiments were done by Harvey White.

Q. What objections, if any, do guests have to spraying their black instruments to lighten them?

A. No harm done by spray. Guests are simply told at the outset that it must be done.

Q. It seems to me that a good part of the success of your show is due to the apparent air of certainty that surrounds every telecast. I believe this must be due to rehearsal, and it reflects my previous stand that we, in ETV, need to have rehearsals.

Rudy Bretz commented at this point that on his UCLA programs on ballistics missle experimentation they had no time for rehearsals. He agreed that they are good to have, but often impossible to obtain.

Gordon Tuell pointed out that the one practice we don't seem to follow in CCTV is keeping things simple. If everything is kept simple, the need for rehearsal time is minimized.

Q. How much monitor watching is done on "Continental Classroom"?

A. White used it very often, because of necessity of reading meters, etc. This type of program often calls for guests to watch monitors, however, for some guests we have to turn the monitors away from their view.

Q. Did anyone in the control room check on the effectiveness of the over-all teaching-learning process?

A. We had someone there to check on errors, but I'm afraid when we got ourselves all wrapped up in the production, most of us failed to note whether the vital points were coming across.

Q. Any particular goals that you yourself tried to attain?

A. Mainly tried to keep in mind that each show was a complete lesson itself and the real goal was to put across the entire lesson for that day.

Q. Did any material that had to be omitted because of time, etc., affect the over-all learning of that day's lesson?

A. No, we made very sure, as I say, that we put across the entire lesson, and that if and when cuts had to be made, no material content was sacrificed.

Q. In your more complicated experiments, how often did things actually not work right?

A. Dr. White had only one experiment fail him on the air. However, enough of the experiment had been completed to show the desired effect anyway. Guest instructors were always told that if anything went wrong to stop and inform the audience that such and so should have happened and if it did, the results would be so.

Q. Getting back to this business of rehearsal, it seems to me that planning, as such, is very important in certain situations, often making extensive rehearsal unnecessary. How much more good, detailed, beforehand planning could have been substituted for rehearsal?

A. Whenever you get into shows that use production techniques such as the split-screen effect, you simply must have rehearsals. Also, as far as timing--which is always critical in network shows--rehearsals are again necessary.

Q. Is it possible to set up a class in a room near your studio, with students taking the course for credit perhaps, and discussing it afterward?

A. Good idea, but a bit impractical. Conflicts would certainly arise in where to put these people, both for class and discussion periods, because of the erratic schedule of studio time and space. This sort of thing would be ideal in a campus situation, but in the New York network studio setup, it's impossible.

Q. Do you get much "feedback" from the audience?

A. Yes, we get many letters.

Q. How much, if any, "feedback" from actual students or scholars caused your staff or instructors to change certain things?

A. The Ford Foundation is making a study based on information from these sources. We haven't received many comments concerning production; what little criticism we do receive concerns not staying on the blackboard enough. White often told the viewers not to try and write down everything that he put on the blackboard, just certain key equations, etc.

Q. What is your current budget?

A. About $600,000 a year

Q. Did you work with the same technical crew each time?

A. Yes, we found that it was important to the success of the show to keep the "team" together.

Q. What sort of script did the director use?

A. White drew up a sketch of the equipment and exactly how and when it would be used, with just a sentence or two to indicate movement. Nothing more, however, than an outline script was ever used.

Q. Was anything ever done on the air that caused you to be surprised? That is, anything unexpected?

A. Not that I can think of offhand. We encountered the unexpected on the dress rehearsals and compensated for them.

Q. What is the future for "Continental Classroom"?

A. I think the Ford Foundation, as well as the staff, would like to see this kind of program continue. The network is interested in adapting the show to another similar kind, perhaps along the lines of a foreign language program.

Q. Is it possible to move the show out on location at times, rather than always originate in the studio?

A. Our budget doesn't allow for the high cost of traveling with a unit to a remote location. However, we feel that we get a much smoother production in our studio situation with all the tools at hand.

AVOID CREEPING COMPLEXITY!

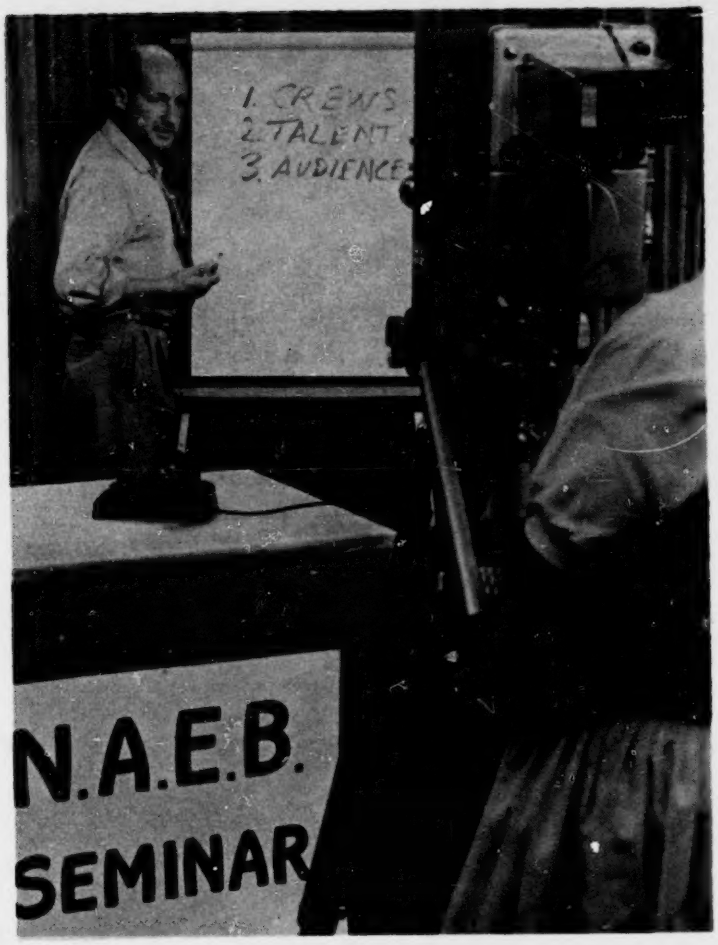
a report on the short presentation by Richard Lewis
San Jose State College

Mr. Lewis stressed the over-all theme of reduction of technical and production complications in television presentations.

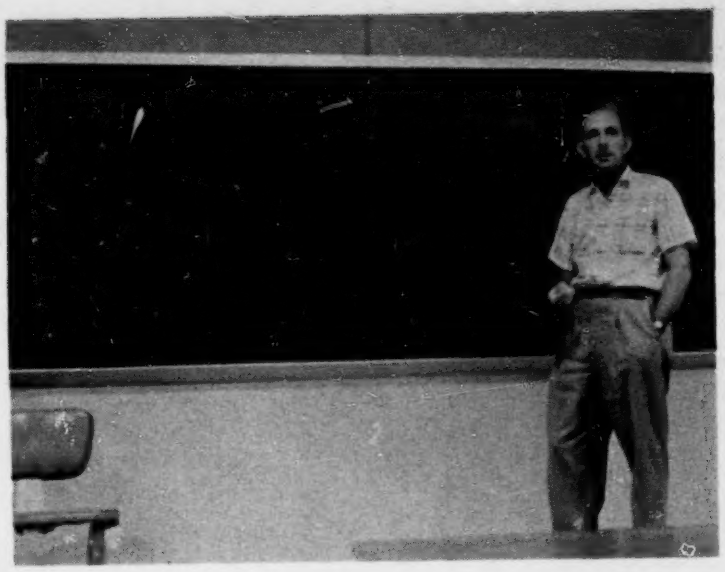
He mentioned that generally there are two types of complexities that are gradually creeping into our productions, whether they be for closed circuit or broadcast. An example of the first type--external complexities—involves the annoying but ever-increasing interferences caused by the many and various electrical systems being installed in large institutions. One example of this is the interference from IBM control systems operating over the AC lines, experienced both at San Jose State College and recently at Penn State University.

The second type of complexity is internal—internal factors that work constantly to complicate and hence reduce the effectiveness of our TV presentations. One example is the overloading of production gimmicks into a simple classroom presentation.

Mr. Lewis closed his brief talk with the statement that with the advent of closed-circuit instruction there is growing up within the fields of television and education a brand new breed of people. In presenting instruction over television, men who used to be able to devote themselves entirely to their medium now must be able to deal with ideas, ideals, teaching processes, and the contribution of others on an entirely different plane. We are making our television people into more than just producers or directors; they are becoming educators as well. And with this new breed of producer-educator comes the need to retain simplicity. In Mr. Lewis's own words: "Four men closing in on a nervous bird will insure quick flight; one expert man may make a friend. Technical crews, especially, need to cultivate the 'invisible' waiter's techniques."



Gordon Tuell, University of Washington, discusses "Production in a New Environment."



Rudy Bretz, University of California at Los Angeles, explains the part perception plays in the communicative process.

Photos on this page by Donald E. Schein, Mohawk-Hudson Council on Educational TV, Schenectady, New York.

In an informal discussion at the seminar, left to right: Hans-Werner Deeker, University of Georgia; Maurice del Pinal, of Guatemala; Paul Blanshard, Jr., University of Pennsylvania; and DeLayne R. Hudspeth, University of Chicago.

DeLayne Hudspeth, University of Chicago, and William T. Dale, University of Minnesota, talk with Paul Blanshard (whose back is to the camera) after one of the seminar meetings.

XI. Banquet Speech

BANQUET SPEECH

Harry J. Skornia
NAEB

Before starting with the gist of what I wish to discuss, I'd like to insert two quotations which serve almost as my text.

The first is an item from the Christian Science Monitor, under the title of "Murray's Microvision":

> To those who have said all along that television gives its viewers the wrong perspective on life, Laurie Murray of Sydney, Australia, offers a solution: a 1-inch TV set he constructed from parts of 50 old radios and other oddments.
>
> If anything can put half a dozen hours of daily mayhem in perspective this may be it. Watching the final gunfight of the day's final Western on the equivalent of the end of a quarter-pound stick of butter should help the average viewer regain his command of reality. It qualifies as the next best thing to actually turning off the set. Instead of Blab-Off it would be a kind of blab-down.
>
> Mr. Murray apparently had no such social purpose in mind when he put together the world's smallest TV set. In the tradition of Everest climbers he said simply that he built it "because it was a challenge."
>
> His 1-incher is itself no commercial challenge to the proprietors of the 21-inch-TV business. But we do wish those gentlemen would pin a picture of his miniature set on the wall beside their THINK signs. It might serve as a useful reminder to all TV executives: Is this program really worth 21 inches of space in millions of living rooms?

The second is from a news story in the Chicago Tribune of August 26, 1959, and includes statements of concerns, by foreign students in attendance at the Twelfth Annual National Student Association Congress which was in session at the University of Illinois.

One item quoted revolves around the desire for security rather than opportunity in the sense of the old days. It goes like this:

Oh, mute
Sitting stiff lipped in com-
        mittee: We don't ask
        to be
Seasoned or inspired.
We don't seek wisdom's
        warmth;
We just want
Each of us, a good job.

The other is still more serious:

> Foreign students envy Americans the magnificent campus facilities available to them, the libraries, the apparatus in laboratories, the grounds, housing, and buildings in hundreds of America's advanced schools. They also envy American students their closeness to faculty members.
>
> "What we all sense and never understand is the American scorn of learning and of accomplishments in learning," a dozen foreign student observers or participants in the congress told

this writer. "It seems that American tradition of hard work and of overcoming a harsh nature has led its people away from appreciations of learning for the sake of learning."

"Americans go to school to prepare themselves for succeeding," said Nory A. Adrous, 22, an Algerian student who has spent a year at the University of Missouri in Columbia, Mo. Prior to his entry into the United States in 1956, he had studied in French elementary schools in Morocco and later a French university in Toulouse.

"In all Europe, there is the fiercest kind of competition to obtain an education. Students carry work loads many times heavier than in the United States and are constantly examined by professional committees which demand real attainments and real capacities before permitting young students to advance to the higher institutions."

So much for Prologue. I have essentially six points to make here.

◆ 1. Don't be satisfied with closed circuit only.

a. Frequencies are still not secure.

b. The national movement is only on the threshold of what it can become. Networks are possible.

c. Rural and poor areas need help.

d. We can't wait for today's children to grow up to save the world. Everyone has an adult education responsibility.

e. Actually, although the number of college, university, and school stations doing direct course-related instruction is as yet relatively small, when it *is* done it provides an example of cooperation and integration between the various levels of education which is not found outside the broadcast area. The resources of the whole state (and the universities, schools, museums, and industry) are thus made available to the most remote and poorly staffed schools in the state in a way impossible through any other channels.

As a nation we are committed to equal educational opportunity for all. Yet today in hundreds of rural areas there are no teachers qualified to teach physics, modern languages, art, music, and many other urgently needed disciplines. Many paraplegics and many who are aged, or infirm, or blind--or even simply ashamed to go "back to school," perhaps with their children or grandchildren--are left unserved. The millions of illiterates we have (and refugees who need to learn our language and our traditions) are unrealized resources of our nation--as well as, in certain places, the sources of delinquency and crime. The need is here. The tools are here to help solve these problems.

◆ 2. Look into radio--as a serious medium--not just as a student-operated training facility or toy.

THE PHILADELPHIA AND WISCONSIN STORIES

Annual reports of the Philadelphia Public Schools reveal a large number of instances in which radio has proved to be more effective (not just more economical) than television--in music, music appreciation, in-school broadcasts requiring students to listen and do things at the same time, and programs intended to develop the creative and the imagination.

At Wisconsin, Professor James Schwalbach, after trying to do by TV the in-school Art Broadcasts which for years had been a feature of the Wisconsin School of the Air, returned to radio for them. His reasons: For his purposes and approach, at least, the products of his TV broadcasts seemed to limit . . . to stereotype . . . to make for imitation far more than radio. With less concreteness and less realism, radio gives imagination freer sway.

THE KPFA STORY

About one year ago a report was published under the title: *Voluntary Listener-Sponsorship: A Report to Educational Broadcasters on the Experiment at KPFA, Berkeley, California.* It was written by Lewis Hill, former President of KPFA, now deceased.

This station, now supported *wholly* by voluntary listener contributions on an annual basis, was an experiment, financed largely by the Fund for Adult Education. The question which this experiment sought to test was essentially this: Can such a station count on income, on a subscription basis ($10 per year) from a significant enough minority of the population (2%) to "produce annual revenues to cover operating costs"? On the basis of the Pacifica experiment, the answer can now be given in the affirmative. The implications of this "discovery" for educational and cultural broadcasting in the United States are tremendous.

Started at a time when prospects for FM were good, most of the years of the experiment were years of FM decimation--people were unable even to get replacement parts for sets. In an industrialized age when standardization and the concept of radio and TV as "mass" media penalize the minorities which have tastes for something finer, how willing is a minority to pay specifically for a service that not only satisfies but also challenges it (much as the small-circulation "little journals")? The answer is a tribute to the discrimination of intelligent Americans, once given a choice.

◆ 3. Our objective is not *teaching* but *learning*.

This idea first came to me in discussions about how to find the proper role of the teacher, and his lecture, in course broadcasts. Some teachers want to *talk* or be on camera all or most of the time.

I suggested that we explain to such teachers that the purpose of the broadcast is *learning* (within the student). In some cases more and better learning may take place from film clips, etc., or with the teacher silent. In such a process, the greatest contribution a teacher can make is to set the stage; then keep quiet, and stay off-camera.

◆ 4. *Understand* your medium.

MARSHALL McLUHAN PROJECT

We have recently negotiated, with the United States Office of Education, under Title VII of the National Defense Education Act, a contract in *Understanding Media*. This project is based on the conviction that critical listening and viewing, like critical reading, must be taught and learned. Educational uses of these media, like educational uses of print and other media, also require special training. This must begin with analytic understanding of the nature and grammars of the various media. Quoting from our statement of the problem, as outlined in our project presentation:

> Print-based learning is, as compared with that of modern media, a slow, incomplete process. Print is lineal. We read word by word. Ideas and impressions come gradually, at a relatively slow rate, largely through the eyes alone. One plane at a time is involved, and ideas emerge at a controlled rate from a concatenated succession of frozen images largely, after the first year, encountered in solitary reading. The reader has time to stop, analyze or reread. Even so, we have recognized the need for courses in literary appreciation and analysis as a basis for uses of the written and printed word. The dangers of unskilled or unethical uses of print-based media have been recognized, and nearly every teacher is asked to serve partly as an English (i.e., print-based language) teacher. Good courses in this area recognize the interaction between the passage read and the reader. Essentially these courses assume print-based patterns of thought and behavior, as well as communication.
>
> In classrooms today, most teachers called upon to guide and control uses of radio and television, do so as if these were merely extensions of print and lineal methods and approaches based on print—or merely additions to the tools available. Through no fault of their own, they are largely unaware of the fundamental characteristics of media themselves, as media.
>
> Yet profound and worried scholars have found that, in the case of television for instance, the medium itself, without regard to content, accounts for by far the largest part of its total effect. Scholars who have studied monopoly-BBC uses, uses in the USSR, uses by commercial broadcasters of the U.S., and uses for education, find that television's most profound effects are common to all systems and uses, regardless and independent of message, content, method, use, or *intended* effect.
>
> The principal characteristics of radio, and of television particularly, are non-lineal, all-engulfing, simultaneous. They involve the whole person: kinesthetically, subliminally, emotionally, through all the senses except the sense of smell, in an overwhelming impact that lineally-educated teachers, with step-by-step thought processes, find difficulty in adjusting to, understanding, or controlling. The misunderstandings which arise are natural. For the new media are, in effect,

new languages, no longer lineal but nuclear or spherical in their characteristics and effects. They cannot even be adequately analyzed on a lineal basis or in terms of lineal logic. Their effectiveness cannot be tested by lineal, print-based tests, which limit the amount of effect and impact measurable to a tiny proportion of the total effect felt or achieved.

With media as such now assuming such powerful roles in education, society and human adjustment, "grammars of the media" which will enable teachers and our educational system to cope with them and control them, are most urgently needed. Such grammars would be first used in teacher training and later in media courses for all students in American schools at whatever grade levels seem (from such experiments as this) to be indicated.

A first step in the development of such grammars of the media—through the painstaking experimentation and testing which an undertaking of such magnitude and implications requires, is what is proposed in this document. We propose herewith that education today embark on a new venture: universal education in the languages and values of media themselves, so that each of the new, and old, media may find its proper role, and so the best contributions of each may be preserved and realized in concert with all the others.

This proposal is made because of the fear that an accumulation of projects, based essentially on media as tools, if they ignore these deeper considerations, may only be contributing to a dissolution and revolution which will sweep away some of the finest values in our present great educational system, at the same time that they contribute new uses and values.

SUGGESTIVE PROJECTS AND STUDIES

- In the case of all educators who are essentially specialists in tools or instruments of education, there is a tendency on the part of other educators to see such groups and individuals principally as gadgeteers or technicians. This danger should be avoided at all costs.

- Some very basic studies need to be done on the effects of radio and television lessons on the feeling of "esprit de corps" among students, between students and teachers, and among teachers (broadcaster and classroom user). To what extent can a process of communication become more meaningful for communication and inspiration as well as for conveying information?

- What of enrichment versus total teaching advantages? Of the types and amount of printed aids, teachers' manuals, etc., which are demonstrated as most useful for various subjects and age groups? When do such other aids get in the way?

- Today's curricula are largely limited by what it was possible to teach with the tools, teaching personnel, and traditions available in a "print" oriented age. What new subjects might now be introduced? public affairs courses of a new type? listening and viewing discrimination and appreciation courses comparable to the training now given in the production and consumption of the written media? conservation? others? To what extent does TV, for instance, erase the line between geography and history?

- Given, on one hand, the present situation in which religious education is not a part of the public education and, on the other hand, the apparent confused value systems of youth and adults, to what extent are courses in values, morals, and ethics called for in today's and tomorrow's education? Might TV and education make new types of courses possible in such subject areas?

- What test-procedure changes should be made in order to measure more effectively what happens in non-print education? How does one measure the emotional impact of a documentary school-broadcast? To what extent does this reinforce learning? How do we begin to measure what happens to the learner, instead of only the facts he remembers?

- To what extent are instructional uses of TV and radio vitiated by inadequate technical installations (set size and placement, speakers, acoustics of the room, lighting)? What standards should be established?

- How much follow-through by the teacher is best and how soon--to "nail down" and exploit the true enrichment potentials of radio and TV in education?

- To what extent will teachers accept the validity of the principle of "learning together" from broadcasts in which the teacher has no other role than utilization? To what extent is the "guided thinking," and the process with which the teacher can react with and in the presence of the children, as legitimate a lesson in discrimination and clear-thinking as the role in which the teacher is the expert, in control of all the children see and hear? Can this be measured?

- To what extent does TV (with its ability to bring in guests, films, field trips, travellers) provide a unique ability to present as a unity a variety of visual and all other types of aids for the first time in American education?

- To what extent can radio and TV (open as well as closed circuit) contribute to public understanding and more vigorous support of education? What differences in technique and content are indicated for "free" as opposed to "captive" (closed-circuit or in-school) audiences for both? Public education is not a person. It has relatively no freedom of action, as industry has. It depends largely on tax rates, bond issues, and citizen attitude. The climate of citizen attitude and the public's sense of values regarding education have been shaped more than most of us have recognized, I believe, by the commercial offerings of these same media. This leaves us a great task in correcting the image of education in the United States.

- What new techniques of "feedback" can be developed?

- To what extent can interest in adult education, essential to the individual's growth after leaving school, be developed in the grades?

- We are in the process of developing--in the McLuhan project described above--courses in media understanding, appreciation, and analysis, which we believe will eventually be given in the public schools of America--much as courses in writing and reading have been in our past and present print-based educational system and culture. With laboratories in the form of education's own stations and closed-circuit installations, we are beginning to be able to engage in new types of research which commercial media have not been interested in. What are the emotional and other side effects of radio and TV? What are the unique roles of each of the many media, old and new, now available? We finally have the tools to begin developing media specialists and experts in education.

◆

5. It's the Individual (product of education) that counts: If the United States and democracy have any resource with which to oppose communism or other totalitarian-isms, it is emphasis on the individual.

In view of this, our present status is to me a cause of deep concern. Quoting from "The Rediscovery of Man" by Waldo Frank:

> ...The public personality, not the man; the public commodity, not its intrinsic value; the public show because it is vastly heard and seen, not because it is good—when quantification and proliferation become values. ...Knowledge, organic and therefore hinged on the person, is debased into information; the practice of meditation and contemplation, mother of knowledge, is absent; even awareness of its use is absent.

THE MAN IN U.S. MASS MEDIA

> He tastes radio and television, the magazines, the patriotic and commercial sermons: "daily bread of the nation." ...Impressed by the widespread arts, he is amazed to find that they have no substance. The schools and universities impress him with their sumptuous halls. But the aim of the "universitas" as he knows it—to seek the meaning of man—is missing.
>
> ...And as it proceeds via mass politics, mass production, mass education, mass amusement, the unused muscles of the mind, whose function is to reason, to distinguish, to integrate complexities into wholes, grow weaker while the surrogate mass thinking grows with this specialization of parts that never become the whole; a vicious circle.
>
> With electronics, studio built entertainment invades the home and robs it of its last autonomies...in America and increasingly elsewhere, literacy becomes the ingestion of pap, soft and synthetic, not cognitive, not even informative.
>
> Under our massified systems the school has no organic premise. It teaches social slogans and special skills. These are linked with ego drives of the individual who has to "make his way" ... The notion that a modern city dweller who has been equipped in school to read the Daily News, is a better educated man than the bookless peasant of Mexico and China who is barred from the papers, the best sellers, and the Reader's Digest...is one of the perilous delusions of our era.
>
> The common schedules of our schools do very little for self-knowledge and totally ignore its relevance to skills and information if these are to be nutritive. By taking each subject as separate, they destroy each subject. ...Whatever his subject, he [the teacher] must engage in the exercise of relating his group and ego awareness with the cosmic, for only thus can information become knowledge.

> ...The neurotic, misfit for his society, may be closer to light on his problem as a human self than if he were adjusted; his neurasthenia may be a tentative critique. And the patient who rises from the analyst's couch "cured" of his maladjustment, his organs in working order, his course clear to the top of the social system, may have descended by these victories into greater peril to his self as a man.

The great peril of individualism must be kept in mind by all educational broadcasters who wish to serve our nation with instruments which all too easily lead to more, rather than less, standardization. Remember the individual, and keep him in your planning.

◆ 6. Become a part of the Profession of educational broadcasters.

We have set out to create a profession of educational broadcasters. I need not remind you that the only personnel in commercial broadcasting who have to meet any standards whatever are the engineers. They (by analogy the delivery boys) must have licenses. Those who put up the prescriptions, or who make and package the intellectual and emotional food and drugs transmitted, have no standards to meet. We in education are seeking to set such standards voluntarily. In intensive workshops and seminars throughout the United States in the last six years, and with scholarships for advanced study in basic social, economic, and educational areas, we have made advanced, professional training available to over 1,500 members of educational radio and television station staffs. The foundations of a true profession are being laid. We invite you to full membership and participation in this growing profession.

The little band of individuals in our association who, years ago, had dreams about the great usefulness of these electronic instruments of education, and who fought for frequencies for education--first in standard AM radio (unsuccessfully), and later in FM radio and television (the latter two successfully)--see these electronic instruments not as a replacement of teachers . . . or of space . . . or of higher salaries for teachers but in support of, and as assistance to, all the other tools and resources we can muster. And with them we offer a growing body of dedicated members of our association, who have learned and are daily learning to use these tools in new ways--for the good of American education.

We of the NAEB are dedicated to the development of a sound national communications policy to the end that all the broadcast media, no matter in whose hands they rest, are employed for the greatest good of the nation and the world. We believe education is one of the areas in which these tools--all of them--are most vitally needed.

With reference to individuals who are members of the NAEB (I object to saying "who belong to" the NAEB, since the "belonging" should be the other way around) I believe we have obligations to help each member--

- develop and realize his talents.
- find channels for participation in and contribution to the development of better uses of these media.
- achieve recognition and outlet for the unique contributions which every individual has it in him to make.

These objectives, of course, raise questions about the "role" manner in which the NAEB should do these things. To what extent can it serve--

- the "parent" role--to the individual?
- the "good neighbor" role--with other groups and nations?
- the "pressure group" role--in a time when efforts, no matter how idealistic, must be organized to be effective?

In the latter role, I am not speaking only of "pressure group" functions of the NAEB on behalf of its members or itself.

The mass media in commercial hands have enormously stimulated the expenditure of funds in private purchasing. To quote a recent publication of the American Association of School Administrators, Financing Tomorrow's Schools, "Since 1948 we have spent $151 billion for tobacco, alcoholic beverages and cosmetics; $127 billion for recreation; $73 billion for highways, but only $78 billion for public elementary and secondary schools." Recognizing the need for more education--particularly more social science, humanities, basic economics, psychology--U.S. industry is reported to spend some $64 billion a year on education as compared to public education's $16 billion. Much of this is on executive training courses of the AT&T or GE type, to make up for deficiencies and the time lag in what public education is able to do.

How can we most effectively help to stimulate the development of a balancing philosophy which makes spending for the public welfare as respectable as spending for the private welfare--including largely luxuries--or in industry? To what extent does this need to be "sold" to the citizens of our country? They must be awakened to the castastrophe which will result from a continuation of the present "starvation" basis of subsistence for public education and other related public services. And who will do it if we (as the custodians of amplifiers and channels from education to the people) don't? It is in terms of this need for "pressure" on behalf of all education that I am thinking, as well as of those on behalf of the best uses of TV and radio in education.

Problems such as those referred to above, in turn, raise questions about the kinds of people the NAEB should have as its staff, and how this staff is expected to behave.

- Such a staff should have initiative--but how far can it go in this direction without being accused of ignoring "the will of the people" who make up the NAEB?

- How can the staff encourage healthy controversy and discussion, and still reconcile minority or "radical versus conservative" groups within the association?

Dr. Edwin Stainbrook, chairman of the Department of Psychiatry at the University of Southern California, was consultant to a Leadership Seminar of the Council of National Organizations held last year. He pointed out that the staff head of voluntary associations used to be expected to have principally managerial skills. More recently more need is being expressed for skilled social philosophers, social strategists, human relations specialists, "ministers of disruption" who will keep the association dynamic and in enough of a turmoil so it doesn't become placid or smug.

How about the use of volunteer help? How many people with outstanding skills are not being used? I'd guess that in the NAEB we're really not tapping more than a small fraction of the real resources in individuals in the association.

We run numerous conventions, conferences, seminars and workshops, and publish numerous periodicals and studies. In them:

- To what extent should broad challenges be made to the "whole man" rather than only to the manager (producer, engineer, researcher, teacher, etc.)? Should I, in talks at such meetings, and in publications, be discussing the kinds of things I am now discussing?

- What is the responsibility of the NAEB in meetings, programs, and publications to challenge people to broader, deeper concerns? to help discover and develop in them new talents and energies and interests? to help you, in other words, to fulfill your citizenship and national leadership roles, in avocational as well as vocational senses?

- What balance should we preserve between philosophy and value systems, on one hand, and skills, on the other, in our emphasis? How much can we inspire to higher goals instead of only to greater skills for achieving present goals?

- So far the NAEB has involved mostly "white collar" (supervisor-director) people in our movement. How are we best to reach and tap the "blue collar" or sport-shirt group--which is much larger and younger, and full of more promise (begging the pardon of fellow oldsters)--in all our stations and in all parts of the educational system into which these media are being increasingly introduced? What restructuring is needed to serve this new group without losing the loyalties of those we need at the highest levels, if dynamic group thinking and growth are to be achieved?

How about our relationship to outside and inside financing--our role with respect to foundations or individual member institutions?

- When do we accept grants--or reject them--which might influence the direction or activities of the association away from its essential emphases, local bases, and the upward feeding of ideas (to be sure our educational system remains democratic and encourages new ideas from the grass roots)?

- Foundations have provided "pump-priming" help, without which there would, I am convinced, be no educational radio or television networks, probably no allocations for ETV, and certainly very few educational TV stations. There would be no national movement. Education and education's uses of these media would be in a state which I shudder to contemplate. These contributions must not be forgotten. But these benefactors have told us that they cannot support these media developments indefinitely.

How do we implement a campaign to help local taxing units (and local bases of support of all kinds) to take over and preserve the momentum now achieved? To what extent (however unintentionally) have foundation grants and dramatic projects caused local educators, school systems, or those planning their own stations, to "leave it to the others" instead of methodically "driving local wells" which we need. How can we help the tapping of this type of support--in working with school boards and others? For I think most are convinced such bases must be developed for education's own good--if responsible educators, selected by the people, are to be in control.

- How large a central staff should the NAEB develop--from outside funds--in view of the need to insure continuance when and if outside funds are no longer available?

With a potential individual membership certainly on the order of 10,000 or more--if the NAEB is indeed to be the professional association of all or most of those using TV and radio in education--a broad base eventually is assured. But services traditionally attract and therefore must precede membership in a voluntary organization. In what areas can the tempo of developing essential services to achieve self-support be stepped up, without neglecting--and in the face of--urgent but financially nonremunerative national needs which we must at the same time be meeting if we truly serve the national interest as well as our own?

I feel that it is the responsibility of an honest association to identify and work at such problems, however embarrassing, controversial, or troublesome they may be in view of the taboos, pressures, and expedient solutions so general today. Can an association not incite to individualism rather than to conformity (as so many associations find it difficult to avoid doing)?

These are questions I would like to have you reflect on, as you think of the NAEB's role and your part in it. As we recruit new members, we are, of course, recruiting and shaping our own future--for our members are our future.

I invite you to help shape that future--with your most earnest thinking and efforts.

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